THE

MEDICAL REVIEW,

AND

ANALECTIC JOURNAL.

VOL. I. APRIL, 1825. No. 4.

ART. I.—*Remarks upon Morbus Oryzens of India.* By ROBERT TYTLER, M. D. &c. 8vo. pp. 299.

Observations of M. MOREAU DE JONNES *on the Cholera of India.*

IN the London Medical and Physical Journal, for August, 1824, (No. 306.) there is an article of medical intelligence containing the result of *M. Moreau De Jonnes'* investigation of the nature of the *Cholera Morbus* of India. We regret that we have not seen this gentleman's essay, and that we are, consequently, ignorant of the arguments by which he supports some of the conclusions at which he has arrived, as set forth in the article above mentioned. Depending, however, upon the candour of the editors of the Medical and Physical Journal for a fair exposition of M. de Jonnes' views on this subject, we venture to inquire into them. We are not stimulated to this task by a mere spirit of criticism, nor by any desire to expose a fault in a work which, for ought we know, may contain much instructive matter; and, judging from our own experience, must have cost the author much in the articles of labour, privation, and danger. On the contrary, although we are

inclined to differ from M. de Jonnes on one or two important points, we are gratified to find that a disease so violent in its character, apparently so disposed to spread its empire through populous regions, and, consequently, threatening to become so fatal to our species, has been made a subject of regular investigation.

Another writer on the Cholera Morbus of India has also some claim to our attention, at least, for the novelty of his doctrine, and for the industry which he has displayed in loading many pages with its exposition. We allude to Dr. Tytler, who, during his residence in India, has published several pamphlets containing narratives of the appearance, progress, and effects of the disease in question, in various places within the East India company's dominion.

This gentleman is the author of an opinion respecting the cause of the Cholera Morbus, which we will introduce in the course of the present article.

According to Dr. Tytler, the disease made its appearance in the "*immense tract*" of country, constituting the district of Jessore,* in 1817, since which time it has become so extensively prevalent throughout India and its neighbouring islands, and even in the eastern and southern borders of Europe, that it may well be considered as one of the most interesting subjects of medical inquiry of the present time. The investigation of the cause of the oriental cholera presents many difficulties, on account of the suddenness of its attack, the violence of its symptoms, the rapidity with which it hurries its victims to the grave, and, lastly, the great extent of its prevalence in regions including such varieties of soil and climate as to forbid us to seek a local cause to which epidemics may usually be traced. The progress of the generality of diseases affords the practitioner sufficient time to make his observations, to correct his errors, and to trace the character of the morbid action in the symptoms which are successively

* 130 miles in length, and 80 in breadth.

presented. Not so, however, with this dreadful scourge of the East. It frequently happens that a continuance of this disease for from six to twelve hours, is sufficient to extinguish life. We have seen numerous instances of workmen beginning their daily task in all the plenitude of health and cheerfulness, and without any premonitory symptom, attacked with excessive vomiting and purging, which exhausted them in a few hours. Hence, there is but little time for the intervention of medicine, and none at all for a deliberate diagnosis.

Another cause of the great fatality of this disease, is the insuperable prejudice of the ignorant natives against the use of medicine from the hand of a foreigner. Some remarkable examples have occurred, in which the wretched sufferers preferred the certainty of death to the danger of offending against their religion and *losing cast*, by swallowing any thing that had been touched by a christian. On one occasion, as we were walking on the bank of the river opposite to Calcutta, we met a native who had just been seized with violent symptoms of cholera. Medicine was immediately offered to him, but he refused it. The danger of his situation was represented to him, still the proffered assistance was urged in vain—he professed to be perfectly conscious of his desperate condition, but he dared not take medicine from a white man. He was carried by his comrades into the shade of a neighbouring grove, and abandoned to his inevitable destiny, for they had learned to resign all hope of repelling an attack of this formidable enemy.

With regard to the remote cause of the cholera of India, Dr. Tytler prides himself in having traced it, in Jessore, where he first saw it, to the use of some rice which had been disseminated through that district; and while the disease was confined to one place, and to a few cases, in each of which the patient had indulged in the use of this article, the Doctor's opinion was at least plausible; especially if he accused this particular crop of *Ouze rice* of possessing deleterious properties. But as the disease continued from year to year, and

spread in every direction, long after this deleterious crop had been consumed, some other cause must be sought. The doctor pears, in his subsequent essays, to attribute it, therefore, to the use of *new* rice generally. He supports this opinion by relating many instances in which his patients had eaten new rice, and we are by no means disposed to doubt the fact that they had partaken, and largely too, of this diet; for we well know the propensity of the Hindoo for a good mess of fresh rice. But alas! have not our dingy brethren been in the habit of eating such rice, generation after generation, from time immemorial? and why should those of the present day find their bane in that which nourished their forefathers? But even granting the possibility of the degeneration of the plant to which so many thousands look for almost their sole subsistence, their suffering by its use will not explain the similar suffering of others who had not swallowed this "deadly poison." Now it is well known that many who have not used rice in any form, either old or new, have fallen victims to the cholera morbus. We recollect two cases which occurred in the persons of individuals who had enjoyed the most perfect health for months previously to their attack, and who had not eaten rice in any form. Indeed, many European and American sailors, shortly after their arrival in India, fell victims to this disease; and it is very probable that few, if any, of these men had eaten rice when they had a plentiful supply of green and esculent vegetables, which are peculiarly delicious to those who had been long deprived of them at sea. But a single instance of cholera morbus, in which the patient had not swallowed the "mortal poison" of Ouze rice, is sufficient to disprove the doctrine of Dr. Tytler; and we have seen many, and have good authority for many more. At the same time, we do not deny that the immoderate use of rice may induce a disorder of the digestive system, especially when we consider that many of the Hindoos eat but one meal a day, and this is often so large as to astonish one who is unacquainted with their habits. Perhaps this practice, taken in connexion with

the debilitating heat of the climate, has given rise to many cases of cholera, and other diseases, in which the digestive system is particularly implicated; but it is insufficient alone to explain the existence of the present epidemic, which finds its victims among men of every variety of habit and constitution, although, as it is with other diseases, there are certain kinds of constitutions, and certain habits, which favour more than others the attack of this malady. In this particular, we differ with M. de Jonnes, who appears to consider all persons equally liable to the cholera of India. We did not find this to be the case in 1818; on the contrary, while vast numbers of the lower classes of natives were daily falling victims to it, those of the higher classes, who used a more nourishing and various diet, were comparatively little afflicted; and its appearance among Europeans and Americans, especially those lately arrived, was a rare occurrence; it was also more difficult of cure in the former instances than in the latter.

These facts throw some light on the nature and cause of the disease. The lower classes of the Bengalese, especially in the cities, are confined to a poor diet, exclusively vegetable, and if they enjoy any variety in their meals, it is only a different method of cooking the same article. We have heard it remarked, indeed, by both Brahmins and Europeans, that in the city of Calcutta, and probably in other places, there were many thousands of natives who had eaten nothing but rice throughout their lives, since they had been weaned from the breast. They are also thinly clad, and exposed to all the vicissitudes of the weather, for their huts, being principally built of bamboos and palm leaves, afford but an imperfect shelter from the rains, which, at certain seasons, are very heavy; and many have not even this poor assylum. We have more than once been obstructed in our rambles through the streets of Calcutta, at night, by numbers of these sleeping wretches, who, like Campbell's exile, had "no refuge from famine and danger."

We all know that proper food, and a certain degree of re-

gularity in rest and exercise, are necessary to healthy digestion, and we know, also, that if, from any extraneous cause, this process is frequently interrupted, the digestive organs become debilitated, and otherwise suffer derangement of their functions, so that a sudden removal of the remote cause of their disorder will not immediately obviate the injury sustained. Hence we might reasonably expect to find, among the poor vagabonds of Calcutta, many instances of diseases, which have their origin in derangement of the digestive system. The cholera, which has been so fatal among these people, is, in every respect, purely a disease of the childpoetic viscera, of which the stomach appears to be the first part affected. The disease is first detected by violent emesis, with pain in the head, soon succeeded by stupor. The evacuations *per anum* are generally, if not always, preceded by these symptoms of gastric derangement. The pulse is very much depressed at the outset of the disease, and continues to become weaker, and less frequent, until life is extinct, unless the patient should be so fortunate as to have obtained proper means of relief.. The matter first ejected from the stomach consists chiefly of unchanged food—subsequently it has the appearance of turbid water, and, in some instances, it contains bile. This is rarely the case. The appearance of bile is generally a favourable symptom. The stools are watery, and, after a time, become bloody. The stomach from the commencement of the vomiting, is remarkably insensible to the action of stimuli, and, if the case be a violent one, in the course of a few hours from its commencement the most powerful stimuli, given *ad libitum*, will scarcely produce any sensible effect. We saw one case in which French brandy, warmed and spiced with cloves and red pepper; spt. terebinth: aq. ammon. and tr. opii, were successively employed, and in excessively large quantities, without producing any impression upon the pulse, or interrupting the regular course of the disease. In this case, the patient, as well as we could ascertain, had been ill but six hours, at the time that the first dose was given him. He died in less than fourteen

hours. In another instance, however, in which nearly the same remedies were exhibited, from the second hour of the attack, they were completely successful.

Both of these cases occurred in the persons of American seamen. We have good reason to believe that the first could not be attributed to the use of rice, but we are positively certain that the latter owed its existence to some other cause. The patient, in this case, was a very intemperate man, and had been frequently intoxicated by various kinds of liquors, during the two or three weeks immediately previous to his attack.

We are of opinion, upon the whole, that the disease in question is simply a derangement of the digestive functions, depending, most probably, on debility, especially of the stomach; and, therefore, without requiring the operation of any specific poison, such as Dr. Tytler's "Ouse rice," it may be induced by any causes which either directly, or indirectly, debilitate the system, so as to impair the powers of the digestive apparatus; and we know that, in tropical climates, causes, equal to these effects, abound.

We must also differ from M. de Jonnes on another point, namely, that the Indian cholera is equally prevalent at all seasons of the year. According to our own observations, and those of the medical gentlemen resident in India, with whom we have conversed, the state of the weather had a very marked influence on this disease, which was sometimes perceptible from one week to another. During the hot season many deaths occurred from cholera morbus, and but few after the S. E. monsoon set in, and spread over the land the cool refreshing sea air.

With regard to the means of curing this disease, a few words only are necessary. It is evident that a disease capable of running through its fatal career so rapidly as the Indian cholera does, can be successfully opposed only by a prompt exhibition of the most active remedies. The practitioner who attempts the treatment of such a disease by a cautious

essay of the powers of his remedies, and the capability of the constitution of his patient to bear them, will generally find that he has withheld, through timidity, the remedy which, delayed for a short time, cannot be effectually applied by the boldest hand. It is impossible then to effect any thing by a circuitous method of practice, such as may be admissible in other diseases, whose tardy course render them capable of successive attacks at each of their vulnerable points, ere they can arrive at the consummation of their evil tendency.

The stomach appears to be the only medium through which we can make an impression on the disease in question. It appears, indeed, to be, as we have heretofore said, the organ chiefly interested. Its natural action has been suspended, and it can only be recalled to its sensibility, and have its healthy functions restored, by the application of some remedy sufficiently powerful to overcome the morbid impression which has been made upon it. All those substances, therefore, which are capable of stimulating this viscus to the prompt discharge of its functions, when in a healthy state, may be useful in its present debilitated condition. Many of the middle simple stimuli would, in all probability, be sufficient to check the progress of the cholera in its incipient stage; but so rapidly do the vital powers succomb to its influence, that, after it is completely established, it is tangible only by the heavy artillery of medicine.

There appears, also, to be a morbid irritability of the intestines, so that the presence of matter, the most inoffensive to them when in health, now urges them to the most inordinate efforts to expel their contents, while they are negligent of all their other functions. Hence, opium is found to be very useful in allaying the nervous irritation, and thus putting a stop to the excessive evacuation. This is best given in cholera, as in all cases where it is desirable that it should act promptly, in the form of tincture; and as the stomach has lost much of its sensibility, as we before observed, it must be given in much larger doses than could safely be exhibited under ordi-

nary circumstances. Other stimuli, such as ardent spirits and spices, have also been found to be very useful auxiliaries to the opium; and, in some instances, much benefit has resulted from the application of sinapisms over the abdomen. The patient should be covered by warm blankets, and have the surface of his body frequently rubbed with a flesh-brush: in a word, every means should be resorted to for the purpose of exciting a determination to the surface.

The great emaciation consequent to a few hours continuation of cholera, indicates the existence of a preternatural activity of the absorbents. We cannot, indeed, account for the vast quantity of fluid that is discharged from the stomach and intestines, without supposing that it is supplied by these vessels. After the violent emesis and catharsis have been completely checked by the above mentioned means, a moderate dose of castor oil, combined with a few grains of calomel, should be given, to prevent the torpid state of the bowels consequent to the opium which had been exhibited. Subsequently, the treatment should consist of nutritious food, with a moderate use of port wine, or brandy, and rest.

The observation of M. de Jonnes, that all constitutions were equally liable to the attack of the cholera of India, and that no system of living would diminish the liability to it, reminds us of an observation of Dr. Armstrong, in his treatise on Typhus, in which he alludes to the habits of living most likely to exempt strangers in India from the bilious disorders so prevalent and so fatal in that region. Although somewhat foreign to the subject of this article, we presume that a few remarks on this very important question will not be deemed impertinent. They are not directed against the opinions of any certain individuals, but against a very common prejudice, and one which has unaccountably found its way into many valuable treatises on diseases of warm climates.

In the advice which is given for the preservation of health, in hot and sickly climates, attention to diet is generally recommended, and very properly; but this vague language is

commonly interpreted as an interdiction of all manner of rich, stimulating food, condiments, &c In some instances, an exclusively vegetable regimen is recommended; and the stomach is refused any assistance, save that of water or thin beer, to its digestion of this ungracious aliment.

Now, it is perfectly consistent with reason, and with our knowledge of the influence of the digestive organs upon the system in general, to suppose that a predisposition to bilious fevers may be the result of improper habits in regard to the kind and quantity of food. That kind, for example, which is difficult of digestion, and yields but a small proportion of nutriment, may impair the strength, and derange the healthy functions of the system, by debilitating the stomach and other viscera employed in digestion. Secondly, the digestive power of the stomach may be so weak as not to be able to overcome the common chemical laws, to which all matter is subject, and correct the tendency of the food to fermentation and putrefaction. And that these processes do sometimes take place in the stomach, is, we believe, not doubted.

In warm climates, when the system is relaxed and debilitated by excessive perspiration, and other causes, the powers of the digestive organs are diminished. If, then, healthy digestion be desirable, by what rule do we present to the stomach that kind of food which requires the greatest time, and consequently the greater exertion of the chylopoitic vicera for its assimilation to the body?

As far as our observation has extended in the torrid and temperate zones, we have not seen that the plan of vegetable diet, and abstinence from stimulating drinks, is at all calculated to preserve the system from the inroads of disease. On the contrary, we have seen so many instances of its failure, that we are inclined to consider it as positively pernicious. We have had frequent and ample opportunity of comparing the effects of this system with the opposite one of generous diet, and the use of condiments and stimulating drinks, and the result has been, without exception, favourable to the latter.

We are aware, that in recommending the use of spirituous drinks, we tempt the wrath of a certain class who habitually anathematise all such *indulgences.* We are well acquainted with all the imposing arguments which have been advanced in condemnation of every practice which may lead to intemperance; but we would respectfully remind our cautious opponents, that in recommending the *use* of ardent spirits, we are not to be understood as favouring its *abuse.* It is a medicine, when properly used, and, like all other medicines, it becomes a poison only when misapplied. But to pursue our argument—we have stated, that all the powers of the system, vital as well as physical, become enervated in warm climates. Does any one doubt this—let him observe the effects produced upon a strong and healthy man, from a northern clime; by a few years residence within the tropics, where the ruddy complexion of health declines into the melancholy hue of disease, where activity is lost in slothfulness, and strength gives way to imbecility. We may take a wider view of this subject. We find, universally, that the inhabitants of warm countries are inferior to those of colder climates, not only in physical power, but also in mental energy, and in the duration of their existence.

It was, no doubt, intended that all parts of the earth should be peopled—go where we may, we find animals which are supplied with food adapted to their peculiar necessities.

In cold climates there are fewer vegetables than in warmer regions, and we find among those of the latter a much greater proportion of spicy, stimulating plants. Why are the warmer climates thus supplied with productions of this kind? Nature does nothing in vain—she does not place an animal in one part of the world who must depend upon the productions of another for his subsistence; and with respect to omnivorous man, he finds in every land those articles of diet, which the peculiarities of the climate render necessary to the preservation of his health. In cold climates, where his strength is not exhausted by perpetual perspiration, he does not require those stimulat-

ing condiments which are necessary to assist his languid digestion in tropical regions.

Whatsoever effect these considerations may have upon our opinions respecting the dietetic system which a visitor to a warm climate ought to adopt, we do not depend solely upon them; for. however plausible they may be, we have the better, the unanswerable testimony of experience to the same effect. During many summers, spent in hot and sickly countries, we have devoted much attention to this subject, the result of which is, that generous food, and a proper use of stimuli, proportioned in quantity to the exercise and to the heat of the weather, affords much better protection against violent disease than the cautious system pursued by some, who destroy all their energies by starvation and want of exercise; fearing that a latent fever is reposing in the system, and may be roused into dreadful activity by a drop of brandy, or an honest meal.

We have also observed, in those who live well, that the bowels are more regular than those of the other class; and this we know is an important criterion of the state of the system, as regards its tendency to febrile disease.

The early occurrence of vomiting, in cases of bilious fevers, goes far to prove that the stomach is affected previously to the existence of any apparent symptom of disorder. It has most probably been debilitated so as to allow of the formation of acid matter from the food which had not been properly digested. In warm countries, many complain of an uneasy sensation in the stomach immediately after rising in the morning, which is removed by eating. It is customary with such to use bitter tinctures and other forms of stimulus in the morning, from which they derive immediate relief. Although this practice has been warmly reprobated by those who have never experienced its good effects, and whose prejudices prevent them from seeing its propriety, yet we are inclined to think that, under certain circumstances, it is extremely beneficial.

In the year 1818, when great mortality prevailed among

the crews of the European and American ships lying at Calcutta, we made an experiment with the crew of the ship Bainbridge, the effect of which was so satisfactory, that we are induced to mention it here, in support of the position we have taken.

A quantity of tincture of gentian was made with good French brandy, of which each man of the crew was required to take a small wine-glassful every morning before breakfast, and another a short time before dinner. The consequence was, that after this practice was established, not one instance of serious disease occurred on board this ship, while, among the other vessels, not one could be found that had not lost several of its crew. It is possible that other circumstances concurred to the remarkable exemption of the crew of the Bainbridge from disease, but we have sought them in vain; for they lived in all respects in the same manner, and were subject to the same exposure as their less fortunate neighbours. We have, indeed, observed in other countries, during a sickly season, in hot weather, a similar practice pursued, and apparently with good effect.

Dr. Johnson, in his essay on tropical hygiene, strongly reprobates the *abuse* of stimulating drinks, in which we cordially concur with him: but, unfortunately, he has neglected to treat of their *use*. Dr. Johnson brings, in support of his doctrine, the case of a very good-humoured, lively gentleman, at Prince of Wales' island, who enjoyed excellent health without the assistance of stimulating drinks. We have not the least doubt that such instances exist; but, on the other hand, we could bring numerous instances in which the health has remained unimpaired for many years, under the other extreme, with regard to drinking; in some of which the individuals never passed a day without a rich and hearty dinner, and seldom went to bed sober.

We have seen many instances in which the stomach has become debilitated, by the use of pure water, so as to reject that fluid, when it has been freely used to abate the thirst

consequent to profuse perspiration. Sometimes it would return from the stomach, as insipid as when it was swallowed, which seems to prove that its rejection was not the effect of any acrid matter in the stomach. We have frequently experienced this effect of cold water, and we have never failed in obviating it, by a small quantity of some stimulating drink, such as a glass of wine, or brandy and water. In recommending also a vegetable regimen in preference to animal food, to residents in India, Dr. Johnson very innocently overturns all his theory by contrasting the fat hearty Brahmin, who indulges in the pleasures of the table, with the lank Cooly, who is confined by necessity to the simplest food. The difference between the higher and lower casts, in external appearance, is, indeed, too remarkable to escape the most careless observer; while the latter are generally small and meager, and of very dark complexion, the former afford many examples of robust and portly men, and we have seen among them some of the finest models of the human figure.

Upon the whole, nothing can be more unphilosophical than an attempt to prescribe any system of regimen which will be applicable to all, unless we first reduce all the various constitutions of men to one scale, and confine all men to one given proportion of exercise and rest. In excluding either animal or vegetable matter, we would act in an injudicious extreme, and in the use of drinks, we may fall into the same error, by confining ourselves to pure water, on the one hand, and by a free indulgence in inebriating potations on the other.

T. M. H.

Art. II.—*History and method of cure of the various forms of Epilepsy.* By John Cooke, M. D. F. R. S. &c. &c. 8vo. p. 235. London, 1823.

The present work affords us no opportunity of amusing our readers with ingenious speculation, but it enables us to serve their interests much better by presenting them with an analy-

sis of an excellent practical work, on a disease that occurs in every clime, and among all classes of the human family.

Although Dr. Cooke has added but little from his own experience to our knowledge of the nature and causes of epilepsy, the judgment and industry which he has displayed in embodying within a small space, the observations of both ancient and modern authors, especially with regard to the remedies for this disease, entitle him to a rank among the useful friends of medical science.

In the history of epilepsy, the author presents us, in a condensed form, all the causes to which this disease has been ascribed; and with a number of remarkable and authentic cases, illustrative of the variety of sources in which epileptic affections have their origin. These are so dissimilar as to leave no foundation for the belief that the disease can be ideopathic, but they seem rather to prove that it is always a symptomatic affection, and that its primary cause may be located in the brain, the stomach, the intestines, and sometimes in a remote and unimportant nerve. In the following passage, however, our author advocates the opinion that a predisposition to epilepsy may exist in certain constitutions.

"With regard to predisposition to epilepsy, we have no clear and distinct knowledge. We cannot ascertain its nature, nor even its existence, in many cases, or whether or not it be necessary to the formation of the complaint. Some pathologists are of opinion, that it is not necessary, and that epilepsy may be produced, and in some cases has been produced, by a new and strong impression in a perfectly well organized brain and nervous system, and independently of predisposition. Be this as it may, I am inclined to believe, nay, I think it evident, that a certain constitution of brain and nervous system exists in particular persons, which renders them especially liable to this disorder; that there is a much greater sensibility, irritability, or what Dr. Cullen calls mobility, of brain and nerves, in some persons than in others, which constitutes predisposition to epilepsy.

"We see some persons easily elated by hope, and depressed by fear, and passing quickly from the one state to the other; easily pleased, and prone to gaiety, and as easily provoked to anger, and rendered peevish, and liable to strong emotions from slight impressions. This is the temperament *qui colligit et ponet iram temere, et mutatue in horas;* this is the *varium et mutabile fœmina.*

Whether, in all cases of idiopathic epilepsy, a particular predisposing constitution exists or not, it is certain that the disease is excited in some persons, by causes which do not produce it in others. A certain confirmation of cranium, in particular, seems to predispose to epilepsy. Leduc remarks, that the head of epileptics is larger and the skull thicker than in healthy persons; and Lorry and others confirm this observation.

The circumstance of epilepsy occuring in successive generations of the same family, is also strongly in favour of the doctrine of permanent predisposition.

Dr. Cooke observes that in whatsoever the predisposition to epilepsy may consist, it is evidently increased by a plethoric state of body. In this he agrees with Hypocrates and Van Swieten, as well as with many modern authors. "In almost every case," says our author, "which I have had an opportunity of seeing, the disease has occurred in full habits and sanguine temperaments." He adds, however, Dr. Prichards' opinion, that no particular temperament is peculiarly liable to epilepsy, and that this gentleman "has witnessed its appearance in every variety of habit, from the most exquisite examples of the sanguine, to the most marked melancholic."*

"The *exciting* or *occasional* causes of epilepsy," says Dr. Cooke, "are of various kinds, and act in various ways. Some are stimulants, producing, it is supposed, an increased action or energy of the brain; and others sedative, operating so as to diminish that action or energy. Of these causes, some act directly upon the brain, others produce their effects primarily upon distant parts, and secondarily upon the brain.

"Among those which act primarily upon the brain, the chief are mechanical causes, such as malconformation and injuries of the cranium, tumours, depressed bone, sharp pointed spiculæ, situated on the internal surface of the skull, hydatids, congestions distending the vessels of the brain, changes in its structure, or diseases in its substance, and effusions of various kinds," &c.

We cannot agree with our author in arranging these *mechanical causes* of epilepsy, under the title of "*exciting* or

---

* Prichard or Nervous Diseases.

occasional" causes, under the supposition that they merely determine a latent predisposition to activity. We think that they are amply sufficient to produce epileptic symptoms without the aid of any other circumstance; and if this be granted, it is not strictly philosophical to seek a more remote cause, such as a predisposition, with which they have no natural connexion.

Partial plethora is mentioned as the cause of most frequent occurrence, "after epilepsy, the vessels of the brain are often found overloaded with blood, and in a state of great distention. The celebrated anatomist Meickel, declares, that in his numerous examinations of the brain, he had never seen such an *engorgement* as that of an *epileptic* in the hospital at Berlin." But how does this harmonise with what follows. "There are other causes which also produce their effect primarily upon the brain, but probably by a *sedative* power, or by diminishing the energy of that organ, or, as Dr. Cullen calls it, by collapse. These are, depressing passions, fear, terror, grief, disagreeable impressions on the imagination and senses; the recollection of former paroxysms,* or their causes; or whatever greatly *weakens the action of the heart*, as hemorrhage, or other excessive evacuations."

Under these circumstances we could hardly expect to meet with cerebral engorgement: but it is one of the characteristics of this singular disease, that the most opposite causes seem equally capable of exciting it; and neither the plethoric *bon vivant*, nor the abstemious *decharné* are exempt from its attack.

Among other causes to which our author traces epileptic affections, are the sudden suppression of long established discharges from the body, and of cutaneous eruptions, worms,

---

* We have witnessed an instance of the efficacy of this exciting cause. The patient was a young gentleman of delicate constitution, and had been subject to epilepsy for a considerable time. Frequently, the slightest hint respecting his disease, or a visit to the spot where he had recently suffered a paroxysm, would throw him in convulsions. H.

and other offensive matter in the intestines, injury done to the nerves, or a morbid state of them.

"In the Edinburgh Medical Essays and Observations, a case is related of a violent epilepsy which frequently occurred, which was produced by a hard cartilaginous substance, of the size of a large pea, situated upon a nerve. That this was really the cause was evident, as the disease ceased on the extirpation of the tumour. In the same journal we have an account of epilepsy depending upon a calculus of an irregular figure, about the size of a nut, (*quere, a hazel-nut or a cocoa-nut*) pressing on a branch of the sciatic nerve; and another, in which the *par vagum* was compressed by a concretion of a similar kind."

He also refers to the observations of M. de Maisonneuve on gastric epilepsy, for the example of eighteen men, who were shipwrecked, and of whom fourteen fell victims to epilepsy, occasioned by the use of sea water and the indigestible food to which they were reduced, in evidence of this disease being sometimes the result of irritation of the nerves of the abdominal viscera.

Dr. Prout is also quoted, and his opinion, that acrid solids or fluids, bile, but principally worms in the stomach and intestines, are the direct causes of that nervous irritation which gives rise to epilepsy; and this opinion is supported by the appearances exhibited by these organs when dissected.

"On opening the bodies of epileptic persons, particularly of those cut off by the disease in the fit, this writer found the arterial system strongly developed in the small intestines; while the larger intestines were seen containing a greater or less number of worms, particularly of ascarides. These worms were chiefly found in the cæcum and the ascending portion of the colon. The mucous membranes of these bowels were more or less inflamed, according to the vigour of the patient and the duration of the disease."

Van Swieten is also quoted for a case in which a boy died of epilepsy, apparently occasioned by a worm perforating the duodenum: and Wepffer for an instance of the disease excited by a tape-worm, in which a cure succeeded the discharge of the animal: and another case in which the patient, after suffering for several years, "with such frequent paroxysms as to

occasion a total imbecility and absolute loss of memory," recovered her health and her faculties on voiding a worm.

M. Fabricius of Helmstadt, Bartholimus and La Motte, are referred to as authority for some instances of epilepsy arising from the irritation occasioned by biliary concretions in the gall bladder, and calculi in the kidneys and ureters. Lastly, Dr. Cooke mentions poisons and irritating articles of food taken into the stomach, as causes of epilepsy, of which some instances are related.

The uterus is next mentioned as the seat of the primary cause of epilepsy. "Some writers," says Dr. Cooke, "mention epilepsy as occasionally produced by pregnancy. Tissot mentions several cases of this kind which fell under his own observation. In one of them, the patient had, in three pregnancies, experienced an epileptic paroxysm almost every week, till the motions of the child were perceived."

During the pregnant state, it is true, that women are subject to a variety of complaints, which seldom or never appear under other circumstances. If we can rely on the state of the mind as indicative of nervous derangement, or disposition to nervous diseases, it is not improbable from what we observe in some women, that pregnancy may induce that form of nervous disease under consideration. But simple pressure on a nerve has been mentioned as a cause of epilepsy, of which some instances have been given above. If this be the case, may we not refer those instances of the disease which have occurred during pregnancy, and which have been referred to some mysterious influence of the gravid uterus upon the nervous system, simply to compression of some branches of the lumbar or sacral nerves by the head of the fœtus? In support of the affirmative of this question, it may be remarked, that the disease disappeared after parturition, and indeed upon a slight motion of the child, which, in all probability, relieved the suffering nerve from compression. With a case of this kind before us, it is impossible to arrive at a demonstration of the actual cause of epilepsy during pregnancy. We must,

therefore, be content with probability. With regard to the compression of a nerve by the fœtus, we know that this may take place, and we have good reason to believe that it frequently does; and in the cases of epilepsy, where the disease immediately disappeared on the removal of tumours in the course of the nerves, we have a ready solution of the phenomenon of its disappearance during pregnancy after the motions of the child. But if we maintain the idea that the disease is connected with the state of the uterus, we can see no reason why it should be in any degree affected by the motions of the fœtus, inasmuch as such motions can have no effect on the state of the uterus. We have, then, one cause whose efficiency is established, and which frequently exists during pregnancy—why should we grope in the darkness of mystery for another to the same effect?

"With respect to the connexion between nervous disorders," says Dr. Prichard, "epilepsy is a distinct disease from apoplexy and palsy, and yet its relation to both is very near; and they all frequently pass into each other. Persons who have partially recovered from a recent apoplexy, are often assailed by convulsions, which display most of the phenomena of epilepsy; and fits of the genuine epileptic character frequently occur after an attack of hemiplegia. On the contrary, persons who fall victims to repeated fits of epilepsy, perish under all the symptoms of apoplexy; and others who recover from a severe fit, or from frequently repeated fits of epilepsy, are often found to labour under hemiplegia, or other modifications of palsy. Sometimes persons who have long suffered under epilepsy, lose this disease and become permanently paralytic."

Dr. Prichard also thinks "that insanity is still more intimately connected with epilepsy. In very severe and inveterate cases of epilepsy, the paroxysms of this disease are often followed by attacks of maniacal delirium, which are generally of the most violent kind. These fits of madness most commonly abate in a few days after the epileptic attacks have ceased; in other instances, however, the maniacal state is of longer continuance, and epilepsy is often the harbinger of a permanent and hopeless insanity."

Thus we find that epilepsy has so many connexions with other diseases, that we can scarcely admit it in any instance to be ideopathic. It appears to be purely a result of nervous irritation arising from any cause, even mechanical injury. It

has also been observed to attend dentition and exanthematous disorders in children, and irregular menstruation in females.

Dr. Cooke proceeds to investigate the proximate cause of epilepsy; and after alluding to the ancient opinion of a pituitous humour in the ventricles of the brain, and the symptoms of the disease produced by an effort of nature to relieve the brain from the pressure of this fluid, he mentions the opinion of Boerhaave and Van Swieten, that the disease resulted from "too great action of the brain on the nerves of motion, without any on those of sensation," and then introduces more at length Mr. Mansford's theory, which we think possesses some ingenuity, though it is very hypothetical. This gentleman supposes that the proximate cause of epilepsia is an accumulation of the electrical fluid in the brain. He takes it for granted that the electrical and nervous fluids are similar, and that organized matter can control electricity so as to restrain it from its tendency to diffuse itself equally among connected bodies not under the influence of the vital principle. Muscular contraction, therefore, is produced by a flow of the electrical fluid from the brain, which is its reservoir, along the nerves to the muscles, by an effort of the will; but in epilepsy, the will is unable to control the distribution and action of this fluid. "The vital principle being absolutely overwhelmed and losing its command, the motive powers of the system become for a time obedient to those laws which would govern them in any other situation.—The vital principle being freed from the load which threatened its existence resumes its seat and power."

It is impossible to reason with any decisive effect on an hypothesis like this—it is too much like seating the soul in the pineal gland.

The opinion to which our author seems to lean, for he does not positively express his bias, is that of "derangement of the organization of some part or parts of the brain and nerves within the cranium."

"In epilepsy," says Dr. Cooke, "sensation is impeded, and motion is morbidly increased, and is no longer performed in obedience to the will.

Now it is not unreasonable to suppose that this may depend upon a deranged state of the organization of certain parts within the cranium, because we can have no doubt that whatever be the nature of the sentient, willing, and first moving power, it acts and is acted upon through the medium of organized matter: and, because on dissection after epilepsy, derangement of the organization of parts within the cranium have been very often actually found. In order that the perceiving power may act perfectly, it would seem that its instruments must act perfectly. For the perfection of vision, the organ of sight must be unimpaired. If the eye be obscured, sight will become obscure; if its transparency be restored, distinct vision will be restored. Similar observations might be made respecting the other senses."

To the opinion of those who place the proximate cause of epilepsy in diseased structure of the parts within the cranium, it has been objected, that in many cases, on examination after death, of persons who have been affected with the complaint, no marks of disorganization whatever, after the most minute and careful investigation, could be found. It does not, however, follow, that no such derangement of organization exists. The structure of the various parts within the cranium is so exquisite, and the particular uses, or functions of them so entirely unknown to us, in health, that derangements of the greatest importance may exist in them without the possibility of our being able to discover them.

To the opinion that epilepsy immediately depends upon derangements of the structure of the brain, as abovementioned, has also been objected that much of that organ may be destroyed without producing any symptoms of the disease: but this does not appear to me to be an insuperable objection, for I believe that the facts on which it depends, relate only to the destruction of the parts of the *cerebrum*, and it seems highly probable that the organized parts immediately connected with sensation and motion, are placed in the lower region of the cranium. This opinion is confirmed by some experiments made by Sauvage, and by the observations Wenzel already particularly detailed. Sauvage observes, that if the denuded brain of an animal be perforated with a sharp instrument, no sensation will be occasioned; but if the in-

strument reach the origin of the nerves, or medulla oblongata, an epileptic paroxysm will be produced. Now, the parts pointed out by Mr. Wenzel as the principal seats of organic derangement in epilepsy, and those by the injury of which Sauvage was able to induce the disease, very well correspond. The experiments of the last mentioned author seem to confirm the extraordinary observations of the first.

If, however, we could prove that in very many, or even in all cases of epilepsy, these derangements of organization had taken place, it is extremely difficult for us to understand how such derangements could produce some of the symptoms of the disease. That sensation and motion should thus be abolished, we may conceive; but how are we thus to explain the increase of motion which takes place in epilepsy? The theory abovementioned by Boerhave and Van Swieten, or the notion of a spasmodic increased action of the parts necessary to motion, would perhaps afford a better *rationale* of this phenomenon. Notwithstanding the pains which many ingenious physiologists have taken, in endeavouring to understand this subject, it still remains very obscure; and perhaps we must in candour admit the truth of what has been said by the learned author of a dissertation on epilepsy, who, speaking of its proximate cause, observes, "*Est quasi terra incognita, in qua quisque pro voluntate sua vagatur et viam diligit jam factam, aut facit. Auctores de hac re multas plausibiles et populares fabulas effinxerunt; hæc vero omnia novimus esse nihil.*"

The author's short chapter on the *Diagnosis and Prognosis* of epilepsia, presents nothing new or remarkable beyond what is familiar, we presume, to every practitioner. The methods of treatment, however, occupy about two-thirds of the volume, and on this subject Dr. Cooke has collected every thing of importance, from both ancient and modern sources.

When those symptoms which are generally observed to be the precursors of an epileptic fit occur, or when the fit is

completely established, in what the author calls ideopathic epilepsy, he recommends early and active depletion by blood-letting and purging, which may be carried to great length in patients who are favoured by youth and robust habit. In aged patients he thinks that cupping is more advisable than general blood-letting. This, however, is merely in obedience to the general rule, that a young and strong animal can lose, without injury, more blood in a given time than an old and debilitated one. We believe that in some instances of epilepsy occuring in aged patients, it would scarcely be prudent to depend upon so gentle and inefficient a remedy as cupping. If there be an engorgement of the vessels of the brain, this method of abstracting blood is too gradual to produce much effect upon the general circulation. As an adjunct to the lancet it may in some instances be beneficial. The purgative, he very properly remarks, should be of the most active kind, and if necessary, its operation should be promoted by stimulating enemata.

Aretæus recommends an emetic, previously to the accession of the fit, and Frazer says that "the patient, if an adult, should swallow from thirty to forty drops of laudanum, in a draught of camphorated emulsion," immediately on the appearance of the premonitory symptoms. "The common effect of this is found to be the complete prevention of the paroxysm, and the restoration of the patient to his usual health. When the medicine fails in entirely preventing the accession of the fit, its violence and duration are uniformly mitigated by it."

With regard to the practice of Aretæus, Dr. Cooke does not approve of the use of emetics in this disorder, especially in plethoric habits. He confesses his want of experience in the use of opium.

We think that our author has passed over this plan of treatment with less ceremony than it deserves. The proper cure for epilepsy must depend upon the nature of those causes which produce the disease. For example, if it arises from

worms, or any form of irritating matter in the intestines, cathartic evacuants are peculiarly indicated: if from plethora, there is perhaps no class of evacuants which would not be in some degree useful. But if the disease arises from nervous irritation by a local cause, as a wounded or compressed nerve, we might reasonably expect to derive great advantage from a variety of stimulating articles, and particularly from opium. In fact, opium, among other narcotics and antispasmodics, is mentioned farther on, (p. 169,) as having been strongly recommended in the cure of epilepsy.

In those cases of epilepsy in which the fit is preceded by the *aura epileptica*, the author quotes Aretæus, Galen, and Cullen, in recommendation of the ligature between the point where the *aura* is first felt, and the brain. This method, it is stated, has frequently prevented a paroxysm of the disease. Dr. Cooke, in his directions for the treatment of a patient, during a fit of epilepsy, after giving the usual precautions for restraining the muscular exertions, guarding the tongue from laceration, &c., seems inclined to dissuade us from the use of the lancet, upon the authority of Heberden, who says, that "bleeding during a paroxysm, is calculated to lessen the strength of the patient, but not the power of the disease." He also introduces an observation of Tissot, that spontaneous bleeding from the nose has occurred during the fit, without mitigating its violence, and he also alludes to the difficulty of performing the operation upon a convulsed patient, as an argument against this practice.

We regret that we are at variance with our author on this point; with regard to the remark of Heberden, it has a specious appearance, but we do not think that it will withstand the test of examination. It is too commonly the case, especially among the ignorant, to suppose that a portion of blood taken from the veins of an animal, is so much taken from his strength, and that the loss in the latter article is permanent: nothing can be more absurd. In the first place, if the strength was in direct proportion to the quantity of blood,

still, as the blood abstracted is soon reproduced, no important injury could be sustained, unless the depletion be carried to great excess; secondly, when the whole muscular system, as well as the arterial, is agitated by excessive action, there is much more danger of succeeding debility by a continuance of the convulsion, than could reasonably be expected from the loss of as much blood as would arrest the fit, even though syncopy should be repeatedly produced. If we imagine that the brain is oppressed with plethora, the propriety, nay, the necessity, of blood-letting is beyond all question. As to the difficulties which attend the operation upon a convulsed person, they are easily overcome by a skilful hand.

A case illustrative not only of the good effects of blood-letting, but also of the exhibition of opium and camphor, is quoted from Mr. Earle, by our author.

"A short time since I witnessed a singular result from the local abstraction of blood, in a case of long standing. A lady, between thirty and forty, had been subject to fits from her infancy, for which she had been treated with strong stimulating nervous medicines, and very full diet. She generally experienced a succession of fits, to the extent of six or eight; and the attacks were always preceded and followed by severe head-aches, and much convulsive twitching. I found her just coming out of a second fit, and quite insensible; her countenance was crimson, and her eyes quite feretty. The determination to the head was so very marked, that I immediately recommended cupping from behind the ear, which was performed to the extent of sixteen ounces. She speedily became sensible, and had no return of fits; but instead of falling into a profound sleep, which was the usual consequence of an epileptic paroxysm, she became extremely talkative, and her imagination was so unusually active, that she soon began to speak as if conversing with persons who were not present. By reasoning with her she was made sensible that she was talking incoherently, but soon relapsed again. I was called to visit her in this state, and by giving her a powerful dose of camphor and opium, she very soon became composed, and fell into a quiet sleep, from which she awoke perfectly well and free from head-ache. The effect of the sudden abstraction of blood from a surcharged brain, in this case, was very curious, and might lead to much speculation; but as facts are rather desired than theories, I give you the simple narrative."

With regard to Tissot's remark of the failure of epistaxis to remove a fit, we do not think it by any means conclusive

nor, indeed, worthy of any weight. It seldom happens that a quantity of blood escapes in this way, sufficiently large to make a sensible impression upon an epileptic paroxysm. Besides which, as we know that the effect of blood-letting depends upon the rapidity of its abstraction, as well as the quantity drawn, we could expect but little effect from epistaxis. The best writers on this disease recommend bleeding in the paroxysm, and we believe that the practice is sanctioned by universal adoption. We can safely say that we have, in various instances, witnessed its good effects in diminishing the violence and the duration of a paroxysm, without the interference of any auxiliary.

On the subject of the radical cure of epilepsy, we feel happy in coinciding with our author:

"For the radical cure of epilepsy, we trust to means to be employed in its intervals. Before I enter on a consideration of these means, I wish to observe that, in this disorder, it is of consequence that the epileptic habit, if it may be so called, should be broken, by avoiding every thing associated with the complaint, or that might bring the thoughts of it to the mind of the patient. As the traces of ideas which are not from time to time renewed, says a French writer, gradually become entirely effaced, so the epileptic aptitude may be destroyed.*

"The predisposition to epilepsy is sometimes hereditary; in which case it is particularly difficult to cure. Indeed, some authors consider the disease, under these circumstances, to be incurable. Boerhaave and Van Swieten speak very confidently on this subject. The former says positively, that hereditary epilepsy is never cured; and the latter observes, that it has been reckoned incurable by all physicians, and that, perhaps, it is not more in our power to remove this latent impression, communicated from parents to their offspring, than to prevent the teeth or the beard from growing. This doctrine, I believe, is not true; and, indeed, Van Swieten admits that circumstances may prevent the occasional causes from rousing the latent predisposition. At any rate, *it is mischievous because it discourages the exertions of the physician.*

"The treatment which the most experienced physicians have recommended, with a view to diminish or remove plethora, general or partial, are

---

* Tissot. See, also, Cullen.—Ed.

depletion by blood-letting and purging, emetics, blisters, setons and issues; the restoration of discharges which may have ceased, or been artificially stopped, and by proper diet and exercise. The most powerful and the most speedy depletion, as I have already had occasion to observe, is produced by blood-letting and purging; and in all cases of epilepsy connected with plethora, I believe these to be the most efficient remedies."

Dr. Cooke illustrates the beneficial effects of lessening the determination to the head, by a remarkable case related by Mr. Earle, wherein the paroxysm, which Dr. Cooke remarks, resembled apoplexy, was frequently arrested by compression of the carotid arteries. Mr. E. has, also, in the history of this case, hinted at the propriety of obliterating by ligature, one or both of the carotids, in such cases, (we presume) of epilepsy as resemble apoplexy, as a means of permanent cure,—for in those which result from irritation in parts remote from the brain, or those which are connected with debility, and are not attended by cephalic plethora, no advantage could be expected from this practice.

In those cases of epilepsy, if any such exist, which arise simply from a determination to the head, this practice may be advantageous. But we have already expressed our doubts with respect to the existence of ideopathic epilepsy.

Dr. Cooke subscribes to the doctrine, that no particular remedy is to be depended upon for the complete cure of this disease, although there may be many means of arresting a paroxysm. Dr. Prichard recommends a free use of evacuant remedies in nervous disorders generally,* and Cullen advocates an abstemious diet as necessary to the safety of epileptic patients. Our author, however, speaks of epilepsy arising from debility, in which quite a contrary course is indicated. In such cases, generous diet, fresh air, tonic medicines, exercise, and cold bathing are recommended.

Among the tonics which have been successful in epilepsy, the nitrate of silver holds a high rank in our author's esti-

---

* See also "Hamilton on Purgatives."—Ed.

mation. It appears that this medicine has generally been given too cautiously, on account of its causticity. Dr. C. relates numerous cases in which it was given to the extent of eight grains daily, without inconvenience to the patient. Many names are quoted by Dr. C. as authority for its efficacy, in that form of epilepsy, which he calls ideopathic. Its property of darkening the skin, however, especially those parts most exposed to light, would, in some instances, be a serious objection to it. It is a curious circumstance that this discoloration of the skin sometimes takes place after the use of the nitrate of silver has been discontinued for weeks, and even months. Dr. Roget mentions a case in which this effect remained without any alteration for twelve years—so that it might fairly be presumed to be permanent. The preparations of copper, zinc, and lead, are also spoken of as remedies for epilepsy.

In epilepsy occasioned by worms, Dr. Cooke mentions turpentine as a remedy, from which the happiest effects have been obtained. It is necessary, however, in the generality of cases, to assist it by cathartics: in fact, these should never be omitted in any form of epilepsy.

"In enteritic epilepsy, attended with torpor of the bowels, Dr. Prichard strongly recommends the use of oleum terebinthinæ, in doses of half a drachm, or one or two drachms with aqua carui, or cinnamomi made into an emulsion, by means of honey, or mucilage. He thinks that this medicine has some specific effect in cases of fits, depending upon enteritic irritation. He is also of opinion that *argentum nitratum*, and those medicines called nervine and antispasmodic, are chiefly useful in epilepsy of this kind. In enteritic disorder, attended with diarrhœa, he recommends absorbents, *hydrargyrus cum creta*, aromatic powder, and infusion of rhubarb, cloves, &c."

The last method of treating epilepsy which remains to be considered, is the application of the actual cautery, or the trephine, to the cranium. One of the most powerful means made use of by the ancients, was the application of heated irons. Aretæus, Galen, and Celsus, particularly recommended, and very boldly employed, this remedy in epilepsy: and

Hippocrates, speaking generally, says, when medicine fails, steel may cure; when steel fails, fire may cure; when fire fails, the disease is incurable. In epilepsy, says Aretæus, the application of fire to the head is necessary, and will be found to be of great use. He directs that the bone should be perforated as far as the diploe, and that afterwards cerates and cataplasms should be used until the membrane is separated from the bones. The naked bones should be trepanned until the black and thick membrane is found. He seems to intimate, that a discharge from the parts should be kept up for some time. Celsus was a strenuous advocate for the actual cautery. After scarifying the back part of the head, and employing cupping-glasses, he directs the application of the hot iron.

In some instances, both the cautery and trephine appear to have been employed by the ancients in attempting the cure of epilepsy; but the moderns, until very lately, did not venture to try the former of these powerful remedies. The operation of trepanning was, however, recommended in some cases by Boerhaave and others of his time. Boerhaave seems to have adopted the ancient opinion, that peccant humours sometimes cause epilepsy, and that the direct evacuation of them may remove it; and Van Swieten observes, that extravasated blood, by compressing the enecphalon, has sometimes produced the disease, which has been cured by the trephine. Tissot recommends the operation of trepanning under certain circumstances of the disorder; and we have an account in the memoirs of the Royal Academy of Surgery, of a case of epilepsy produced by a blow on the head, in which great relief had been obtained by this practice. After applying the trephine the patient remained free from the paroxysm as long as the wound was open, though on the cicatrization of it the complaint returned.

Tissot says, there is a class of epilepsies which have their seat in the head, in the cranium, the investing membranes, or in the brain itself. In cases where external mischief may be considered as a cause of the evil, we ought not to hesitate, he

thinks, to divide the integuments so as to operate upon the bone itself; and he adduces several instances in which the operation of trepanning, which he recommends as perfectly safe, was attended with complete success. Epilepsies depending upon ossification of the membranes, or abscesses in them, or upon hydatids, schirrus, &c. he considers to be absolutely incurable.

Latterly, Baron Percy and M. Gondret have each published a work recommending the actual cautery in epilepsy. The former is in favour of using a very high temperature in the operation. He thinks that it gives less pain, and is more likely to be successful than a lower degree of heat. Instead of exposing the bone by an incision through the skin, he prefers burning through the integuments, not only because it is less painful, but also, because the "simultaneous cauterization of the skin, pericranium and the bone, excites in the cerebral system that specific commotion, that *sensation of fire*, which no other agent can produce."

"As the apparatus for cauterization," says Dr. Cooke, "is so terrific, Scullet has recommended a method of deceiving timid persons in the application; and Baron Percy informs us, that in cases of epilepsy, where the patients were weak and obstinate, he has taken advantage of the paroxysm to employ the cautery, which he has repeatedly done with advantage."

Our author has selected with great judgment, from other writers, all that appears to be useful in the treatment of epilepsy, in its various forms, and he has added, in his work, his own experience to that of others in favour of some of its remedies. We take leave of him with the assurance, that we were much interested in the perusal of his history and treatment of epilepsy, and that we think it calculated to be very serviceable, especially to the inexperienced practitioners of the healing art.

T. M. H.

☞ Owing to an oversight on the part of the Editor, the heading of the first form of the above article was suffered to be worked off before its impropriety was detected.

ART. III.—*A Physiological Essay on Digestion.* By NATHAN R. SMITH, M. D. Professor of Anatomy and Physiology in the University of Vermont. New York, 1825. Octavo, pp. 94.

DIGESTION is a subject concerning which few of our readers will expect to hear any thing of a novel, or, perhaps, even of an interesting character. The peculiar properties of gastric liquor and bile, and the supposed means of chylification and assimilation have so often been detailed, in almost every imaginable shape, that the merest allusion to them is generally understood in the light of a truism. It is probable, therefore, that the title of the work now under review, will not prepossess the public with a very favourable opinion of its contents. We must confess that when we first entered upon a perusal of it, we did not anticipate much interesting matter; although, from our knowledge of the author's character and acquirements, we were certain of meeting with good logic and sound disquisition.

From the exposition, however, which we shall have occasion to make, of the novel and ingenious arguments advanced by Professor Smith, it will appear evident that his production deserves, and must eventually obtain, a much higher degree of estimation.

From the introductory chapter, which treats of the laws of physiological reasoning, we select the following paragraph—inasmuch as it alludes very distinctly to the leading doctrines of the author, at the same time that it will show the logical manner in which he is accustomed to reason.

"When we confine our inquiries to any particular science, with the laws of which we are acquainted, and reason from an effect to a cause, which in its operations we know to be controlled by those laws, there need be no fallacy. But if we enter another field of science, the laws of which we have not investigated, and reason from an effect to a cause, we shall almost certainly fall into an error, for we unconsciously attribute the effect to a cause, with the operations of which we are familiar. Thus, if we combine

two inorganic substances, and, after a time, observe that a remarkable change has taken place in their properties, we at once, and with propriety, attribute it to the influence of chemical affinities; for we know that such substances are exclusively under the control of physical properties. But if we convey certain substances into the stomach of an animal, a polypus for instance, and upon removing them after a considerable time, discover that they have become very much changed, having received new chemical and sensible properties, it is altogether unwarrantable to infer that these changes are wholly the effect of chemical influence; for, as the stomach of this and of every other animal is indued with certain vital properties, and as we are not yet fully acquainted with their laws or uniform habits of action, we cannot say how much, in this instance, is to be attributed to their influence.

"That similar effects, then, in any particular science, are referrible to the same cause, is generally true; but that similar effects in two distinct sciences, the cause being known in one, are referrible to the same cause, is, in principle, false."

As will be seen from the above extract, our author decides, *in limine*, against the doctrine of chemical influence, and attributes the whole process of digestion to the action of the living solids. In a chapter of "Preliminary Observations," he still further developes the same opinion, as preparatory to the more immediately argumentative part of his work. Under this head he takes occasion, after considering the phenomena of vegetable and animal life, to compare the digestion of animals with that of plants; and we must confess that he has made the analogy much more striking and illustrative than we have ever before imagined. As he enlarges very forcibly upon the same idea, however, in the latter part of the essay, we will pass on to an immediate consideration of his statements respecting the phenomena of digestion, and the theories which have been advanced in explanation of them.

In his summary view of the phenomena, which, as far as we can discover, is very accurate, our attention has been especially directed to the following particulars, inasmuch as he lays much stress upon them in his argument.—The accumulation of food in the stomach *immediately* appeases the sen-

sation of hunger, and in a short time restores the vigour and activity of the body, independently of the degree of distention which it affords.—The properties of the gastric juice are "very variable, or very obscure, since of the many experimenters who have carefully analyzed this fluid, scarce any two give the same results. Some have positively declared it to be acid, others, with equal confidence, have ascribed to it alkaline properties. A third class, discovering nothing remarkable in it, have presumed it to be nothing more than the residue of former digestions, mingled with saliva, and a similar secretion from the stomach."—The experiments of Montegre proved that the gastric liquor possesses no power of dissolving alimentary substances out of the stomach.—The properties of chyme are by no means uniform, as they vary with the food employed to such a degree, that there may be said to be as many kinds of chyme as of aliments.—If the eighth pair of nerves be divided, the process of digestion is immediately and completely suspended. The same effect is produced by violent affections of the mind and of the body.—In cases of sudden death, the food contained in the stomach does not continue to be converted chyme, although the stomach may be eroded.

We hardly need inform our readers, that the theory of solution by the salivary and gastric fluids, originally suggested by Chesselden, has been universally adopted by physiologists. According to our author, the erosions of the stomach first observed by John Hunter, and the experiments of Reaumur and Spallanzani, performed by introducing hollow balls, pierced with holes and filled with aliments, into the stomach, are the principal circumstances upon which this theory has been supported. The opposing results of Montegre and others, who have attempted to imitate the process of digestion, by means of the gastric fluid, out of the stomach, have not shaken the confidence of physiologists in the powers of this agent. Although the conversion of food into chyme is regarded as the most important part of digestion, still further

changes are supposed to be wrought on it by the action of the bile and pancreatic juice, after it has arrived in the cavity of the duodenum.

"Such is the theory of digestion at present universally received, and which has long since ceased to be questioned. So confident are men of science in its imperishable nature, that all our systems of physiology and pathology are founded upon it as their corner stone. We are to recollect, however, that the above experiments and deductions were made at a time when the rules of logic, by which we are guided in speculations of this kind, were less rigid than they now are. We are to consider, also, that at that time, the progress of science had shown the previous theories to be altogether inadequate to the explanation of the phenomena of digestion; that the application of chemistry in its improved state to physiological inquiries, was then universal; that, consequently, the ingenious theory in question, offered as it was, by men of high character and great influence, soon came to be generally received, and consequently, ceased to be the subject of that spirited inquiry, which results from difference of opinion.

"But are the evidences in favour of digestion, by the solvent powers of the gastric fluid, sufficient to check further inquiry on this subject? Is the mode of reasoning, which has led to this opinion, conformable to just principles of logic? Does the theory, like that of Harvey, rest upon numerous and unequivocal facts? Are the phenomena of digestion satisfactorily explained by the supposition, and does it harmonize with the general anatomy, physiology, and pathology, of the system."

Our author objects to the mode of reasoning employed in support of this theory, as one which has been "productive of infinite perplexity and error, and which has been uniformly found inadequate to the explanation of physiological phenomena." The first abettors of the doctrine "were led to anticipate the existence of a powerful solvent in the stomach, from comparing the changes which the food undergoes in that organ, with results obtained in their laboratories. This was evidently predicting the means by which nature should accomplish her ends in one department of science, by observing what she has done in another, in which the properties of matter, and the laws by which they are exerted, are entirely different."

"Were it impossible that the changes effected on the aliment in the stomach, should be accomplished in any other way than by a mechanical or

chemical process, their conclusion would be just, for there could be no fallacy in reasoning from an effect to a cause, the operations of which we are acquainted with. But knowing the distinction which exists between the physical and physiological sciences, it is not only possible, but even probable, that this change is wrought by a cause, the operations of which we are but little acquainted with. It is incumbent on those, therefore, who maintain the above position, not merely to show the effect, but to demonstrate, unequivocally, that the gastric fluid possesses such properties as are capable of producing the effects attributed to it, or to show that they can be accomplished in no other way.

"The chemical powers attributed to the gastric fluid are certainly very extraordinary. It is said not merely to dissolve rapidly the great variety of aliments which are taken into the stomach, but to enter into combination with them, and to produce a third substance. Should we not, therefore, expect to discover something equally extraordinary in the *properties* of so powerful an agent? But I have already stated, that this is so far from being the case, that scarce any two persons give the same account of its chemical constitution. Its analysis, therefore, yields nothing to support the theory in question."

We have already alluded to the two principal facts upon which the theory of digestion, by the gastric liquor, is chiefly supported—the erosion of the coats of the stomach after death, and the digestion of food contained in hollow balls, and introduced into the stomach. The author attempts to explain away their force by the following ingenious reasoning:

"With regard to the first of these phenomena, it appears to me, that the advocates of the theory of solution are not aware of the dilemma to which they are reduced, in case it be admitted as an effect of the gastric juice. Magendie, in accounting for the inertness of the gastric juice out of the stomach, attributes it to the absence of certain circumstances, which cannot be accurately imitated. The principal of these are uniform heat and motion. They, it is obvious, are dependent upon vitality, and must cease with it. If, therefore, it be asserted by any, that this fluid acts thus upon the dead stomach, with an energy equal to that of the most powerful acids, it is certainly incumbent on them to exhibit its effects out of that organ, since there can be no reason why they should not be unequivocally demonstrable. If the negative argument be resorted to, that these effects can be produced in no other way, I consider the assertion to be altogether unwarrantable, and the mode of reasoning to be, on physiological subjects, altogether inadmissible. The changes which take place in the human body, in the article of death, have often been observed with astonishment. So numerous and so

striking are they, that much caution is required to distinguish them from those changes which are the result of disease. We know very well, that if we would discover, after death, the morbid evidences of a slight degree of inflammation, the examination must be promptly made, or those evidences disappear. We know, too, that absorption is performed with great energy in the article of death, and I believe after apparent death, or after the animal functions have ceased to be performed. We have reason, also, to think, that appearances, resembling those of ulceration, have taken place after apparent death. These *post mortem* changes are, in a general way, accounted for, on the supposition that the organic functions, particularly those of the capillaries and absorbents, continue to be performed after the animal functions have ceased. Who, therefore, will undertake to say, that the abovementioned erosions of the stomach are effected by a fluid, secreted by that organ, and possessing remarkable chemical properties, because it is impossible that they can be accomplished in any other way? We know very well, the extreme vascularity of the stomach, and that its capillary vessels, and particularly its absorbents, act with unparallelled energy. We know also, that different portions of the stomach derive their vitality from different portions of the nervous system. Is it not possible, therefore, to conceive that one part of the stomach, having lost its vitality, may be acted upon by another which retains it? It is by no means incumbent upon me to make out, even the probability of this supposition, the bare possibility of it is obviously sufficient for my purpose.

"Another objection to the common explanation of this phenomenon is, that in all those instances in which it has been observed, the food, taken into the organ a short time previous to death, has been found untouched, however extensive the erosion of the stomach may have been. It is certainly very singular, that this fluid should produce no effect on the aliment, which, to prepare it for its action, has been comminuted by the teeth, mixed with the saliva, macerated by the fluids of the stomach, and finally imbued with the gastric juice itself; and that it should turn with energy upon the stomach, which has been influenced by none of those circumstances, and which is moreover protected by an epithelium, or cuticle, and its own mucous secretions.

"The experiment of introducing hollow balls, or tubes filled with aliment, into the stomach, was first performed with a view to disprove the supposition of the mechanical action of the walls of the stomach. In this respect, it has completely succeeded; but it has been also regarded as unequivocal evidence of digestion by the gastric juice, although it by no means suggested that theory. Let us candidly examine the circumstances of this experiment, and see whether the above inference necessarily follows. The balls or tubes, employed for this purpose, must have been small, and pierced with holes, either numerous or large, in order to favour the free access of the gastric juice. On the introduction of the balls into the stomach, the

progress of the experiment is entirely hidden from our view, and we know nothing of it, but from the result, which on removal of the balls, is found to be a partial digestion of the aliment contained in them. If it can be shown, then, that it is impossible, that the phenomenon can be accomplished in any other way, the conclusion is just; but this, as in the instance above, is obviously absurd. I hope to make it appear not only possible, but even probable, that the villi of the stomach act immediately on the aliment, and effect the changes that have been attributed to the gastric juice. It is enough for my present purpose that such a thing is obviously possible, and being so, the phenomenon in question is no longer proof of the solvent powers of the gastric juice; for the villi of the stomach, being probably capable of elongation, and attached to a very moveable membrane, would be capable of seeking the aliment contained in the stomach, and of coming in contact with that which is inclosed in the balls; and it is to be observed that it is only that portion which is in the neighbourhood of the holes, that is found changed.

"It is proved by Wilson Philip and others, that it is only the surface of the alimentary mass, in contact with the walls of the stomach, that is changed by the gastric juice: therefore, only that part of the aliment in the balls, which is reached by the surface of the stomach, can be acted upon, according to either supposition. Hence, the fact is as much in favour of the one position as the other, and proves nothing.

"A fact, to which I have already alluded, calculated to throw much light upon this obscure subject, is that mentioned by Philip, and also by Magendie. They both state that, in digestion, no change takes place in the alimentary mass, (except such as maceration effects,) until certain motions are observed to take place in the stomach, by which its inner surface is closely applied to the surface of the aliment; that then, the first changes which are discovered, are on the surface of the food in contact with the mucous membrane of the stomach. A thin layer of aliment is found to be converted into the substance, which is called chyme. This is then conveyed, by the motions of the stomach, to the pyloric extremity of the organ, and a new surface is presented to the surface of the stomach to undergo the same change. To those who advocate the theory of solution, the above must oppose no small difficulty. The fluid, which, we are told, begins to be poured out soon after the food enters the stomach, and which, in some instances, is found in considerable quantity in that organ, must certainly pervade the whole mass of the aliment; why then should its effects be confined to the surface of the alimentary mass? and why should they be simultaneous with certain motions of the stomach? It may be said, indeed, that this fluid acts with such surprising energy, that, at the instant of its secretion, it seizes on the first particle of food with which it comes in contact, and that thus it never permeates the mass of food. This resort, however, would, perhaps, cost our opponents more than they are aware.

It would amount to an absolute denial of the action of the gastric juice upon the dead stomach: for how could it act upon that organ after death, unless it were accumulated in it, and that, when there is food present upon which it has not acted? It would also follow from this supposition, that the secretion of the gastric juice does not commence until the very moment that digestion is found to take place. We might also fairly infer, that its secretion would never take place except food were present, and that then it would never remain uncombined in the stomach for a moment. It would, therefore, be utterly impossible to prove the existence of such a fluid, and in advocating it, the abettors of the theory of solution would abandon all the arguments usually employed, and gain nothing but a supposition.

"Those who believe that the gastric fluid can only act when aided by certain vital powers residing in the walls of the stomach, and account in this way for digestion taking place only on the surface of the mass, in contact with the stomach, are in the same dilemma. On such a supposition, there could be no more proof adduced of the existence of the gastric juice than of the existence of the nervous fluid of which so much was once said. We see, indeed, the surface of the aliment coming in contact with the surface of the stomach, and a remarkable change effected upon it: but shall we say, that this is effected by a fluid possessing remarkable chemical properties poured out at that instant and enabled to act by the vital powers of the stomach? If its powers are exerted in no other way, and at no other time, what evidence have our senses, that there exists any such fluid, except the effect that is produced upon the aliment? I have already shown that this reasoning would be inadmissible.

"The promptitude with which digestion is interrupted, by the division of the eighth pair of nerves, is a sufficient evidence that there is something more than a mere chemical process going on in the stomach, for, according to the commonly received hypothesis, the gastric juice, already secreted, should continue to operate upon the aliment."

In addition to these objections, so ingeniously advanced against the commonly received theory, the author resorts to several other arguments, which are less immediately connected with the usual course of reasoning upon this subject. He insists that, as changes of composition are never wrought upon *volumes* of matter in any of the large reservoirs of the system, it is unreasonable to suppose that digestion can be performed by any influence directly exerted, either by the stomach or its secretions, upon the whole mass of the ingesta.—He intimates, that the variable properties of chyme, now universally acknowledged by physiologists, and the fact that chyle

has never been found in the intestines, both stand opposed to the theory of solution by the gastric juice.—He also thinks that the same theory "does not satisfactorily account for the speedy restoration of strength and vigour, which one experiences on taking food who has fasted till weak and faint." It would appear that some portion of the food must immediately enter the circulation, in order to produce these effects; while, according to the common opinion, the whole period of digestion is consumed in imparting to the ingesta, instead of receiving from them.

The anatomical objections of our author are very striking, and appear to be entitled to consideration. He renders it evident, that the uses of several of the structures concerned in digestion cannot be explained on the commonly received theory, so well as by the one which he has proposed in the latter part of his publication. For instance, the villi of the stomach are apparently organized exactly in the same manner as those of the small intestines. As similarity of structure in every other situation indicates similarity of function, it would be philosophical to attribute the same properties to both kinds of villi; nevertheless, as our author observes, "we are told that their offices are diametrically opposite, that of the villi of the stomach being to exhale the gastric juice, while those of the intestines absorb the chyle." The anatomy of the *thoracic duct* is also shown, in a very beautiful and explicit manner, to be altogether inconsistent with the idea that all the nutritive particles eliminated from the alimentary mass, gain access by it alone into the circulation. He also insinuates that the functions attributed to the liver, by the present theory of digestion "do not correspond with its magnitude, its structure, and its pathological importance."

Having given this very cursory view of the arguments dwelt upon much more largely by our author, we pass on to the detail of *his* theory, entitled "*digestion by the veins of the stomach and intestines, and by the liver.*" As far as we can discover, it is altogether novel; respecting the inge-

nuity of it, our readers must judge from the following extract, and from the reasoning subequently advanced:

"In the foregoing chapter it appears, that no important change is effected on the aliment until it comes in contact with the mucous membrane of the stomach. I trust that I have also shown the existence of a gastric liquor possessing the powers so long attributed to it, to be a fallacy. As I have before stated, we see the aliment come in contact with the walls of the stomach, and an important change immediately taking place upon it. If I understand the relation between cause and effect, we are not to interpose a new link in the chain of sequents, for the sake of aiding the imagination, or for completing our preconceived notions. The presumption is, then, until some new intervening cause can be pointed out, that the change in question is effected by the immediate agency of the mucous membrane of the stomach. If we go beyond this, and assert that the change is effected by a particular portion, or set of vessels, contained in this organ, we require further proof. My proposition is, that the first step in the process of digestion is effected by capillary veins, originating in the villi of the stomach with absorbing extremities, and terminating in the great branches of the vena portæ. The arguments in favour of it are drawn from the results of certain experiments, from the nature of the change effected on the aliment, from the analogy of plants with animals, and from the anatomy and pathology of the digestive organs."

Our author next devotes a long chapter to a consideration of the doctrine of venous absorption, which now appears to be universally regarded as established beyond all further dispute. In very forcible language he demands of those who are so fastidious as still to doubt the truth of this doctrine, to produce equally strong evidence that the lymphatics do actually perform the function so long attributed to them. He would not, however, be understood to deny the functions which the lymphatic and lacteal absorbents are supposed to perform. But he seems to believe that the lymphatics perform some other office than that of removing effete and excrementitious matters from the system, inasmuch as their contents consist of a fluid which is uniform in its sensible and chemical properties, and is highly animalized like the constituent principles of the blood. As his opinion upon this subject appears

to be original as well as interesting, we will transcribe it at full length.

"If the lymphatics exert no influence on their contents, but exist merely for the purpose of taking up that which has become useless, and conveying it into the mass of the blood, why, since nature accomplishes her ends by the simplest means, do not the absorbent branches terminate in the nearest veins, instead of traversing so great a distance to reach the left subclavian?

"From the length of these vessels, which is greatly increased by the convolutions which probably take place in the lymphatic glands, from the nature of their contents and other circumstances, we are led to inquire whether they are not concerned in the important process of animalization, receiving certain parts of the blood from the capillary arteries, which they exalt to a higher degree of organic life. The manner in which their contents combine with the chyle in the thoracic duct, harmonises with this supposition; for we may rationally suppose that they exert an influence on the partially animalized, though comparatively crude fluid, introduced by the lacteals. By the theory at present received, the only fluid that nourishes the system, is here mingled with the refuse matters."

In regard to the kinds of substances which the veins of the stomach are capable of absorbing, he conceives that no more difficulty need be connected with solids than with fluids. Medicinal substances of an insoluble nature, are generally believed to be taken into the circulation. The bones, and other solid parts of the system, are, also, sometimes taken up with surprising rapidity. "In some instances the most intractable substances, when lodged in the flesh, have been absorbed and removed. Plants, by their roots, decompose soils on which they feed, and take up substances which are the most insoluble in nature." Whether solid substances are taken up by the veins in a state of extreme comminution, or whether they are previously resolved, by the powers of life, into their ultimate principles, our author does not undertake to determine.

The appearances of the chyme are considered in the following paragraph, which cannot fail to interest our readers:

"The sensible properties of the chyme I have already mentioned, as furnishing arguments against the opinion in question. They are not less im-

portant in the support which they yield our hypothesis. On the supposition that the villi of the stomach act upon the aliment as suggested above, electing from it such principles as are subservient to nutrition, the appearances of the chyme are precisely what we should expect. The sensible properties of chyme suggested to some of the older anatomists the idea that the aliment was, in the stomach, attacked by a myriad of small worms which reduced it to the uniform pulpy mass of this substance.*

"That this may be effected by a myriad of absorbing mouths, the changes which take place in the aliment render not improbable. An extremely minute mechanical division would of course be effected upon it, and perhaps many substances would be decomposed, some of their proximate principles being taken up. A change in the sensible and chemical properties equivalent to what we actually discover, would of course take place. We should also expect that the chyme would be variable in its appearance as the food employed varies.

"The manner in which different portions of aliment are successively changed, is also much more satisfactorily explained by our hypothesis, for that only can be acted upon which is in contact with the surface of the stomach. This, as stated by W. Philip, by the peculiar action of the muscular coat of the stomach, is made to give place to another layer, and the digested portion is conveyed to the pyloric extremity. The appropriate motions of the stomach are constantly evolving the central parts of the mass and bringing them in contact with the surface."

As Bichat long ago observed, the organic functions of animals and vegetables are of a similar nature. Analogies may therefore be drawn between the two kingdoms, without any violation of the strictest rules of logic, provided the comparison be confined to those properties which are common to both. Of this opportunity the author has taken full advantage, as will be seen from the following extract:

"One of the characteristic differences between plants and animals, is, that the former are fixed to the earth by their roots, the radicles of which take from the soil whatever affords nutriment to the plant, and convey it immediately into the circulation, where it becomes assimilated to the dif-

---

* "Perhaps they were as near the truth as those who consider the process to be performed by a chemical agent, for neither the existence of these wonderful worms, nor of the not less wonderful fluid, can be proved, and if we reason from the effect alone, we should with more propriety ascribe it to the former."

ferent textures of the plant. Animals, on the other hand, must have locomotion, and to render this consistent with digestion, the animal is furnished with an internal cavity capable of receiving those substances which yield aliment, though in a much more concentrated state than they are presented to the roots of plants.

"Plants, it has been often observed, do, in their general structure, as well as in their organic properties, bear a rude resemblance to animals. They have a cuticle, a cutis, and a skeleton. Their sap vessels too, perform a circulation more simple, indeed, but not unlike that of the blood-vessels of animals, and their leaves are obviously their lungs, in which their blood is attenuated and exposed to the action of the air. They have also their secernents and exhalents. But to what in the animal economy shall we compare the radicles of vegetables? I think it will appear that there is no forced resemblance between them and the villi of the stomach. The roots of plants, indeed, are of comparatively great length, and necessarily so, for plants having no prehensive apparatus by which their proper aliment is elected and brought in contact with their roots, the latter must go in quest of it, ramifying to a considerable extent from the stalk of the plant, and drawing nourishment from a great volume of soil. Hence, also, the roots of plants are constantly elongating and multiplying. The radicles of vegetables are indefinitely small and numerous, much more so than one would imagine, who has merely examined such as are torn from the earth. If they are raised with a large volume of earth and this be carefully washed away, they will be found as minute and numerous as the villi of the stomach. The *radicles* of the stomach are very differently circumstanced. The substances from which they are to elect food, are in a much more concentrated state, conveyed into the cavity of the organ, and by its muscular motions successively applied to its surface. Yet they probably have, in some degree, the power of seeking their food by elongating themselves, and by the mobility of the surface to which they are attached.

"By the prevailing theory of digestion, however, an action, by no means analogous to that of the radicles of plants, is attributed to the villi of the stomach, for these last are supposed merely to exhale a fluid which acts chemically upon the contents of the organ. Thus too the digestion of an animal must be less under the control of vital or organic properties than that of the humblest plant; for in the latter, nothing appears to be left to the agency of physical properties, but all to be accomplished by the vital or organic powers. The radicles of plants are endued with the surprising power of acting upon the most intractible substances and conveying them into the circulation; thus silex is detected in the textures of some plants.

"We should expect, in rising from the lower to the higher grades of existence, to find the functions more purely and exclusively under the control of those laws which constitute life, but if the above theory be true, the

laws of inorganic matter have, so far as we can ascertain, more influence over the animal than the vegetable functions. Is it not then more rational to infer from the analogy of structure which I have pointed out, a corresponding one of action, and that the villi of the stomach are endued with the power of electing and absorbing alimentary substances?"

The digestion of some of the inferior classes of animals is also made to bear very strongly in favour of the new theory, particularly that class, the individuals of which do not possess any internal cavity, but take up their nourishment by a kind of placental surface. "Does any one believe," asks our author, "that they perform digestion by means of a gastric juice?" Under this head the case of a fish, which had partly swallowed a large one of its own species, is detailed. On examining that part of the swallowed fish which had been lodged in the cavity of the stomach, it appeared as if a considerable portion of its substance had been eaten away, while that which had not been in contact with the living surfaces remained altogether unchanged. In the stomach was nothing like chyme or chyle, but merely a frothy mucous. Such appearances, in the opinion of our author, correspond better with the theory of direct absorption, than with that of a solution by the chemical action of any fluid.

The following extract will exhibit the new theory in another interesting point of view:

"But I fancy that my opponents are impatient to inquire of me in what manner the changes of assimilation are wrought, and what apparatus is appropriated to that function, in case the process is so little effected in the cavity of the stomach. I reply, that it is accomplished in the capillary and other vessels, through which the aliment is made to pass before it is added to the circulating mass of the blood.

"It is obvious that whatever is absorbed by the veins of the stomach, will be first conveyed through the tissue of vessels indefinitely minute, which may be said to compose the villi of the organ; next through the branches which ramify in the cellular coat, through the long tortuous vessels of sensible magnitude, meandering upon the surface of the stomach and between the laminæ of the peritoneum.

"This, however, is not the most interesting part of its course. On reaching the trunk of the vena portarum, along which it is slowly propelled, probably by the action of that vessel, it is conveyed to the great fissure of the

liver, to be diffused through that large and important viscus, having first been mingled with the returning blood of the spleen, the pancreas, the omentum, &c. It is then again subjected to the action of a congeries of capillaries constituting the substance of the liver.

"Here, then, is an ample opportunity for all those changes to be wrought, which may be deemed necessary for the conversion of aliment into blood. This supposition too, accords well with what we observe in the performance of other functions, by which changes are wrought in the properties of circulating fluids, viz. that they are accomplished not upon large volumes and in large reservoirs, but upon attenuated streams and in minute vessels.

"I have heretofore objected to the prevailing theory, that it does not appreciate the importance of the liver nor attribute to it an office corresponding to its magnitude, structure, and pathological consequence. The hypothesis which we offer exalts it to the highest degree of physiological importance, regarding it as, perhaps, the most efficient organ concerned in animalization."

The phenomena of the fœtal circulation are brought forward by our author, to confirm his peculiar views; and as he has drawn a beautiful comparison between the changes which take place in this circulation, and in that of the lungs, at the time of birth, we shall make no apology for occupying our pages with another long extract.

"It is well known that previous to birth the liver predominates over all the other viscera. It is undoubtedly thus early developed for important purposes, performing, at that time, some indispensable office in the fœtal system. It is conjectured by some that at that time it exerts an influence on the blood which is subsequently assumed by the lungs. The blood which is received from the maternal system is conveyed to the liver by the umbilical vein. It there enters the portal sinus, a part of it being taken up by the ductus venosus, while a large proportion is conveyed by the ramifications of the vena portarum through the glandular structure of this organ. It is not in vain that the fœtal blood is thus circulated through the liver, it is undoubtedly for the purpose of its being wrought upon by the capillaries of that gland, and it is for this purpose that the liver is thus early perfected.

"In the fœtal state the system of the vena portæ is organized at the same time with the digestive organs, but, like the vascular system of the lungs, it is in a great degree dormant, the quantity of blood which it conveys being merely sufficient for their nutrition. The moment, however, that di-

gestion begins to take place after birth, these organs become centres of fluxion, and the vena portarum becomes charged with blood possessing peculiar properties, which, in some way or other, it receives in the stomach, intestines, &c.

"At birth the circulation by the umbilical vein immediately ceases, and its place, as soon as digestion commences, is supplied by that of the blood of the vena portarum. Must we not infer, then, that this last is circulated through the liver for the same purposes as the former? for it is conveyed in the same vessels, and we cannot suppose that they are at once endued with a new action, entirely different from that which they had before performed and which is merely for the purpose of furnishing bile, a fluid which is not needed in the fœtal state, as no digestion then takes place.

"Here, then, as well as in the lungs, we see a surprising change taking place in the circulation at the time of birth, not so promptly, indeed, as that of the lungs, nor so immediately essential to the continuance of life, but not less so in its ultimate effects. We have every reason to think that, as is the case often in the lungs, so also in the portal system an imperfect establishment of its circulation, either from organic defect in the liver or some other organ, is often the cause of infantile diseases marked with indigestion and imperfect assimilation and which often terminate fatally. Who, that has been engaged in extensive practice, has not witnessed the frequent occurrence of infantile jaundice, and that too taking place as soon as digestion has commenced, and in children born apparently healthy."

Here follows another comparison, which is also made to bear strongly in favour of his theory.

"In conclusion of this section, I would point out an interesting analogy, which follows from our hypothesis, between what may be called digestion in the fœtal state, and digestion after birth. It is pretty well ascertained, and if I mistake not, generally believed, that the fœtus must be nourished from the blood of the mother, by means of the absorbing powers of the capillary veins in which the umbilical vein terminates, and which appear to constitute a considerable part of the fœtal portion of the placenta. By our hypothesis the function at birth, is transferred to the capillary veins of the vena portæ, which, as above, appears to perform precisely the same office in relation to the liver, that the umbilical vein does before birth. Let it be carefully noticed too, that *they are the opposite extremes of the same continuous vessel.*

"Another circumstance which strengthens the analogy between the nourishment of the fœtus and digestion after birth, is, that as a part of the nutriment in the latter case is, without circulating through the liver, as I shall by and by more particularly state, conveyed by the thoracic duct into the

venous blood, to be circulated through the lungs before it serves the purposes of nutrition; so also in the former, a portion of the fœtal blood, by the ductus venosus, immediately enters the heart, and as it has in the placenta undergone that change which after birth is effected by the lungs, it is immediately fit for nutrition, and is distributed for that purpose.

"In considering this subject, we are very naturally led to inquire whether the blood of the vena portæ exhibits any properties which would favour the belief that the veins of the stomach and intestines do largely absorb alimentary substances. The unbiassed observations of many, furnish us with a satisfactory reply. Dr. Rush, who quotes authorities in support of the assertion, tells us that the blood of the vena portæ is more crude than the blood of other veins, that it coagulates more slowly, and that it undergoes putrefaction less readily; circumstances which decidedly indicate a less degree of animalization. I believe it is commonly thought by physiologists, that the blood of this system differs more from arterial blood than that of other veins."

The experiments of Flandrin, performed on the branches of the vena portæ of horses, are referred to by the author with a strong degree of confidence. The observation of Haller, respecting the presence of oil in the blood of the same vessels, is also alluded to in relation to this point. The professor was so struck with the importance of these circumstances, that he expresses himself, as really surprised that they "did not suggest the hypothesis," which he thinks he "may say without vanity, we have found at least very plausible upon other grounds."

Hitherto we have found no occasion to object very seriously to the reasoning of our author in regard to any circumstance; in his concluding chapter, entitled "Objections to the Hypothesis of Absorption," however, we have encountered some ideas which we cannot pass over without animadversion. To anticipate an objection which he seems to fear will be brought against his theory from the want of predominance in the size of the united calibres of the veins of the stomach over that of all its arteries, he asserts that the "arteries of the stomach during digestion are exhaling as great a volume of fluid as is absorbed by the veins." A little further on he shows some concern, also, lest the weight of the whole of the

food taken in should not be found to overbalance that of the digested chyme; and he attempts to foreclose whatever objections may be drawn from such a fact, by stating that "the volume and weight of the food are so much increased by the exhaled fluids, that the removal of its more nutritive parts might not be appreciable." Had these assertions proceeded from a mind of an unreflecting character, or had they been made by almost any other person than the author of the ingenious essay which we are now analyzing, we should not, perhaps, have been so much surprised at their fallacy. As it is, they stand manifestly in discordance with the theory which they were intended to support. Our readers, however, will experience no difficulty in ascertaining the position which they must occupy in regard to this subject. Exhalations are constantly taking place from every part of the surfaces, and the secretions are as constantly oozing out through almost every outlet of the body. To supply this incessant wasting, new materials must be somewhere introduced into the circulation. Now the mucous membrane of the digestive apparatus is universally acknowledged to be the only avenue through which any appreciable amount of nutritive particles can possibly gain access to the system. If we suppose, for a moment, that the exhalation from this surface can be equal in quantity to the materials absorbed, we immediately cut off every means of supply for growth and renovation, and the body would, therefore, be undergoing, in all circumstances, a regular disorganization of its materials.

But we cannot divine what could have induced Professor Smith to anticipate any thing contradictory to his theory from the result of experiments, however carefully made, upon the comparative weight of food before and after digestion. For our parts, we are persuaded that the quantity of all the ingesta, both fluid and solid, will be found to be constantly diminishing from the upper to the very inferior regions of the digestive tube.

To prevent the cases of malformation of the liver, related by Lawrence and Abernethy, from being brought forward against his theory, our author offers an explanation which he thinks will give additional weight to his opinions. The hepatic artery was, in those cases, much larger than usual, and it is, therefore, "obvious that the whole mass of blood must have been, in a short time, subjected to the action of the liver." The great peculiarity was, that "the aliment must first have mingled with the mass of the blood after having undergone the action of the absorbing veins of the stomach and intestines, before it was acted upon by the liver." He intimates that these cases resemble those of malformation of the heart, in which life is for a long time supported, although but a small proportion of blood passes through the lungs. But these are not the sentiments at which we were disposed to take exception. He speaks of the influence of the liver upon the circulating blood, as if the secretion of bile were not an office necessarily connected with a performance of its healthy functions. The spleen and pancreas, according to this idea, may, under certain circumstances, "vicariously assist the liver" in assimilating the aliment to perfect blood. In another part of the "essay," he thinks he has "shown that the secretion of bile is probably effected from the arterial blood of the liver."

To both of these opinions, a very little reflection on the part of our readers will afford strong objections. The liver is a real gland, possessing all the parts of that organization which in other glandular structures appears to be specifically calculated for the separation of a peculiar fluid from the blood. The state of its secretion regulates that of the general health; and just in proportion to the derangement of this secretion are the whole digestive and nervous systems thrown into disorder. According to our author's own logic, therefore, it would have been more philosophical to have considered the formation of bile as the especial function of the liver, without

which none other connected with that organ can be performed in a regular or salutary manner. We should have a poor opinion of the spleen and pancreas as subsidiary organs to the liver, provided the bile could not be made to flow from any of the parts concerned in digestion. Nor are we willing to think more highly of the importance of the hepatic artery on account of the credit allowed to it by our author. Because a considerable quantity of lightly coloured fluid, remotely resembling bile, was found in the gall-bladders of the two infants which were found by Messrs. Lawrence and Abernethy to present malformations of the liver, it does not follow that healthy bile can be secreted by the hepatic artery in well formed subjects. On the contrary, we should suppose that the want of health, and the early death of those children, as well as the fact that no instance of a similar malformation has ever been found in subjects of a greater age, would all be considered unfavourable to such a supposition. The insignificant size of the artery, when compared to that of the liver and its excretory duct, and the immense quantity of bile which, under some circumstances, is suddenly secreted, might also be brought forward in opposition to the same idea. But it is unnecessary to say more in relation to this subject: the very mentioning of the only few objections which we have found occasion to make against the reasoning of Professor Smith, will excite the attention of our readers sufficiently for our purpose.

Before we close this analysis, we will notice one difficulty which, no doubt, has already been started in the minds of our readers. What will the author do with the lacteals? Is there no use to be attributed to them in the economy of digestion? The professor has undertaken to answer these questions for himself; and we, therefore, dare not presume to do it for him.

"I presume that it will be inferred, from what has already been said, that I by no means deny *in toto* the functions attributed to the lacteals. Their office is, undoubtedly, to take up a portion of the aliment, to subject it to

To prevent the cases of malformation of the liver, related by Lawrence and Abernethy, from being brought forward against his theory, our author offers an explanation which he thinks will give additional weight to his opinions. The hepatic artery was, in those cases, much larger than usual, and it is, therefore, "obvious that the whole mass of blood must have been, in a short time, subjected to the action of the liver." The great peculiarity was, that "the aliment must first have mingled with the mass of the blood after having undergone the action of the absorbing veins of the stomach and intestines, before it was acted upon by the liver." He intimates that these cases resemble those of malformation of the heart, in which life is for a long time supported, although but a small proportion of blood passes through the lungs. But these are not the sentiments at which we were disposed to take exception. He speaks of the influence of the liver upon the circulating blood, as if the secretion of bile were not an office necessarily connected with a performance of its healthy functions. The spleen and pancreas, according to this idea, may, under certain circumstances, "vicariously assist the liver" in assimilating the aliment to perfect blood. In another part of the "essay," he thinks he has "shown that the secretion of bile is probably effected from the arterial blood of the liver."

To both of these opinions, a very little reflection on the part of our readers will afford strong objections. The liver is a real gland, possessing all the parts of that organization which in other glandular structures appears to be specifically calculated for the separation of a peculiar fluid from the blood. The state of its secretion regulates that of the general health; and just in proportion to the derangement of this secretion are the whole digestive and nervous systems thrown into disorder. According to our author's own logic, therefore, it would have been more philosophical to have considered the formation of bile as the especial function of the liver, without

which none other connected with that organ can be performed in a regular or salutary manner. We should have a poor opinion of the spleen and pancreas as subsidiary organs to the liver, provided the bile could not be made to flow from any of the parts concerned in digestion. Nor are we willing to think more highly of the importance of the hepatic artery on account of the credit allowed to it by our author. Because a considerable quantity of lightly coloured fluid, remotely resembling bile, was found in the gall-bladders of the two infants which were found by Messrs. Lawrence and Abernethy to present malformations of the liver, it does not follow that healthy bile can be secreted by the hepatic artery in well formed subjects. On the contrary, we should suppose that the want of health, and the early death of those children, as well as the fact that no instance of a similar malformation has ever been found in subjects of a greater age, would all be considered unfavourable to such a supposition. The insignificant size of the artery, when compared to that of the liver and its excretory duct, and the immense quantity of bile which, under some circumstances, is suddenly secreted, might also be brought forward in opposition to the same idea. But it is unnecessary to say more in relation to this subject: the very mentioning of the only few objections which we have found occasion to make against the reasoning of Professor Smith,will excite the attention of our readers sufficiently for our purpose.

Before we close this analysis, we will notice one difficulty which, no doubt, has already been started in the minds of our readers. What will the author do with the lacteals? Is there no use to be attributed to them in the economy of digestion? The professor has undertaken to answer these questions for himself; and we, therefore, dare not presume to do it for him.

"I presume that it will be inferred, from what has already been said, that I by no means deny *in toto* the functions attributed to the lacteals. Their office is, undoubtedly, to take up a portion of the aliment, to subject it to

their own action and that of the mesenteric glands, and finally to pour it into the mass of the blood. They probably absorb that part of our food which is capable of being converted into some one of the constituent parts of the blood, without undergoing the action of the liver. What part of this fluid it is which is furnished by the lacteals, and what by the liver, I am unable to say. It has been supposed by some, that the latter organ was concerned in elaborating the red globules. That it assists in completing some one or more of the constituent parts of the blood, I think will follow from what has been said."

Notwithstanding the exceptions which we trust we have candidly made to some of the minor points above alluded to, and the guarded manner in which we may have occasionally appeared to express our own opinions, our readers must have perceived that we hold this production of Dr. Smith in very high estimation. Whether the theory which it proposes will eventually be adopted by the profession, we cannot venture to determine; of this, however, we are certain, that the sound and logical reasoning which it contains, and the novel and interesting views with which it abounds, will recommend it to the notice of every philosophical inquirer into the mysteteries of our science. M.

ART IV.—*A Nosological Practice of Physic, embracing Physiology.* By GEORGE PEARSON DAWSON, M. D. London, September, 1824.

AMONG plain honest republicans, it is not to be expected that much regard will be paid to the titles of books, any more than to those of men. We know too well that the former, as well as the latter, however high sounding, are too often far from being indicative of the value of the things to which they are appended, and that in many instances, they deceive those who form their judgments from them, into lofty notions of a worthless work, in the one case, and into a servile admiration of an empty head in the other. To neither, therefore, do we pay the smallest deference, though we are aware that both are passports to the respect of many good folk on this, and of many more on the other side of the water. To such the title of

the work now before us, "a Nosological Practice of Physic, including Physiology," would have been a promise of something rich, original, and interesting. To us, for the reasons just stated, it was *vox et prætera nihil.* We built no opinion of the probable character of the volume upon it, but passed immediately to an examination of its contents.

The advertisement on which we first cast our eyes gave us at least a hope that the time spent in a perusal would not be entirely wasted; for it informed us that the work was "the result of twenty-eight years devoted to the study and practice of medicine—that the object the author had in contemplation was to exhibit general views of the principles and treatment of diseases, interspersed with *classical*, *physiological*, and *pathological* facts and observations, and that he had constructed a system of nosology for himself, simple, intelligible, and consentaneous with his own experience." This we conceived to be a plain statement of the pretensions of the work to public consideration, and with this to guide our anticipations we travelled from its commencement to its termination—with what satisfaction, it is the purpose of the present article to inform the readers of the Medical Review. The Nosological arrangement, "constructed for the *author's own use,*" presents itself to our consideration first:—Diseases are divided into five orders, viz. 1st, Febrile; 2nd, Inflammatory; 3rd, Nervous; 4th, Cachectic; and 5th, Functional. To each of these belongs one genus, under which the several species treated of, are arranged; that of the 1st, including eleven; of the 2nd, thirty-one; of the 3rd, twenty; of the 4th, twenty-two; and of the 5th, twenty. Even to name all these would carry our paper beyond its proper limits; we shall therefore not venture on the presentation of any thing more than desultory sketches of such parts as have attracted our attention, either by the peculiarity of their style, their singularity, or their special excellence or worthlessness.

On the two first species, of the first order, we have found nothing worthy of serious comment. The latter, febris remittens, is divided into febris mitis and febris flava, the term flava

meaning, as we presume, neither more nor less than maligna, in contradistinction to mitis. We are indeed led to this interpretation by the proposed treatment of it; bleeding to the amount of fifty ounces, being, in the opinion of the author, *never* wrong. To this sweeping conclusion he adds, that "emetics must be interdicted in *every* case, as in the opinion of Moseley, they make the patient vomit away his life." In the next sentence, also, Dr. Moseley is again introduced to inform the reader, that "negroes bear amputation without a murmur." What this has to do with febris flava, any more than with cera flava, we cannot imagine, unless it is meant to justify bloodletting in fifty ounce quantities, by showing, that all the vessels of an entire limb may be divided, without fear of hurting the feelings of the patient. Under the head of Remittent Fever, we meet with a specimen of the *classical*, which we transcribe for our readers as exceedingly bathetic. "The Roman land, once the seat of warriors, statesmen and orators, trodden by the *Fabiuses*, the Scipios, Julius Cæsar, Cicero, Sallust, Livy and Tacitus, appears still to suffer nearly as much from marsh miasmata as it did during the days of Baglivi." A little further on we have also something in the shape of a bull for our amusement. We are informed that "to sleep a night at Baccuno is fatal: by doing so, an English physician lost his life and his wife *escaped*, (*i. e.* by doing so too,) after a dangerous illness."—The sections headed Hectic, Synocha, and Synochus, are filled with common place remarks, not even calculated to amuse. Under the head of Typhus, the author sagely informs us that "contagion is all a mystery, and like all other mysteries will long remain without an Œdipus." He then contends stoutly against the doctrine of spasm and debility in fevers generally, commencing with his postulate thus: "With respect to spasm—far famed spasm, which some men cling to, as a mother does to a sickly child, or a wanton to her seducer, it *never* exists, and *cannot* do so." The arguments which follow, though collected during twenty-eight years experience, have not succeeded in moving us either to the right hand

or to the left of the subject in dispute, and shall therefore be left within the lids of the octavo before us. The reasonings on congestion, to be found in this part of the work, may also be left undisturbed without the risk of any serious disaster befalling the profession, for lack of them. The *treatment* recommended in typhus fever, consists in "*prompt* and *copious venesection*, repeated purgatives, &c." "Tempora mutantur, et nos," &c. On the remaining species of the first order, we refrain from offering any observations, lest the honesty which would compel us to say, we found nothing interesting under any of them, might be mistaken for captiousness.

The 2nd order is somewhat more prolific than the one just noticed, in classical, physiological, and pathological observations. The following specimens are fairly illustrative of the character of each. Under the head of Opthalamia, the author impresses upon us the conviction that without eyes no man can see, and informs us that Leonardo da Vinci thought one was better than two to view objects at a distance. He also states, on the authority of Mr. Cline, that "Dr. William Hunter *imagined* himself to look through the window at the passengers in the street, which he performed without the least uneasiness; next he *resolved* to view the distant Surry hills,—he did so, and the pain was so intense as to make him instantaneously cover his eyes with his hand." Who can learn from the language of the author here quoted, whether Dr. H. did really look at the passengers in the street, or whether it is meant, that he merely *performed his imagination?* Whether he really did see the distant Surry hills, or whether he barely resolved to do so? This, like "contagion and most other mysteries, will, we fear, be long without an Œdipus." Under Parotitis we have another spice of physiology, for the author deems it a proper situation to enter on the consideration of the female breasts. He remarks that "the breasts,—most sacred fountains, as Blumenbach observes, and as Gellius Favorinus, the philosopher, elegantly calls them, the 'Educatores' of the human race, are intimately connected with the uterus,"

something more closely, we have a notion, (to use a Yankee phrase) than with the parotid gland. Perhaps, however, the author intended by introducing the breasts and uterus into his account of this species, to make the transition easy to the subject of the male organs of generation, for his next division appears under the title of Orchitis. This he commences with an extraordinary fact, to wit, that "man has *commonly two* testicles." In continuation he presents us with Vauquelin's analysis of the semen, and a notice of the last illness and post mortem examination of "Gibbon, the celebrated historian, who, under the classic skies of Lausaune, wrote an immortal work!" Phrenitis, our author considers not only as an exceedingly dangerous, but also as a highly insidious disease. He accordingly recommends prompt and bold measures, though not more so than those long resorted to. They consist merely in the active employment of the lancet, aided by cold applications to the cranium. In illustration of the beneficial influence of the latter, it is related of Mr. Fox, that "when in office during his youthful days, he, after a night spent in dissipation, frequently wrote important papers with a wet napkin round his head."

Pleuritis is considered as being so well understood as to entitle Dr. Dawson to pass over it with "Spartan brevity." We follow his example, and hasten to present our readers with a fine sample of the Doctor's *classic* style and taste, found in the section on Pneumonitis, page 76. Nearly five lines are given on the subject of this species, when the experienced and eloquent author breaks forth in the words following, to wit, "Let me be excused if, strongly urged by private feelings, I digress for a single moment. The great Lord Byron, whose name will forever live, died of this disease after an illness of ten days. He refused to be bled because he had been living most *abstemiously*. His noble and dauntless spirit, which despised the world's applause or censure, fled to Heaven, on the 19th day of April, 1824, at Missolonghi, in Greece. It is pleasing to imagine that his fune-

ral-knell will be answered by echoes which may have smote the ears of Socrates and of Plato. He was the child and champion of Greece—he braved all the perils of Turkish jealousy —he climbed Parnassus—swam the Hellespont—bathed his burning brow in the waters of Helicon—and penned sublime verses on the plains of Marathon. The dear and absent friends of the first of British poets, whose genius was scarcely less versatile than that of Shakspeare, may well exclaim, with Tacitus, 'Mihi præter acerbitatem amici erepti, auget mæstitiam, quod assidere valetudini, favere deficientem, satiari vultu, complexu non contigit." After feasting our readers with the above delightful morceau, we need plead no excuse for passing with "Spartan brevity" over the remaining species of the order under consideration. One word, however, we must say on the 12th. "It is," says the author, "a stranger introduced by myself into the Temple of Nosology." The name, under which this stranger is thus introduced, is Pan-cre-a-ti-tis—his character is undescribed, and the mode by which he is to be managed, left to the wisdom of the priests who serve in the forenamed temple.

Order 3d. Nervous diseases—Sp. 1st. Melancholia. 2d Mania. These diseases our author professes to examine in conjunction, yet on neither is he, in any respect, satisfactory. We can discover, indeed, little else throughout the section appropriated to them, but a mock-heroic encounter of Mr. Lawrence and others, who refer the operations of the mind to physical organization. It is truly amusing to find a writer, in a system of Nosology "constructed for himself, after twenty-eight years of experience," placing mania and melancholia under the head of *nervous* diseases, while, at the same moment, he contends strenuously that they both arise *always* from *moral* causes—are not the result of a disordered state of any part of the *body*, and are never cured by *physical* remedies. The author's views would certainly have been better answered if he had yoked them with Hypochondriasis, (a cousin German of at least one of them,) and given them a place

among functional diseases, the last and most curious of all his orders. But it is not our object to instruct so experienced and learned a practitioner of our art, far as he has fallen short of communicating instruction to us. Mr. Lawrence must feel highly complimented by the following remarks:—"Mr. L." says our author, "asserts, that '*the various forms of insanity, that all affections comprehended under the general term of mental derangement, are only evidences of cerebral affections, in short symptoms, of diseased brain.*' This will not do, and Mr. Lawrence *knows* it will not do." Again, after a series of interrogations and argumenta ad hominem, he concludes that it is not in the manner of Mr. Lawrence, "this material—this Lucretian manner, that the proximate cause of mental derangement is to be revealed—this is not in the spirit of that inductive philosophy which Bacon practised in his life, and illustrated by writings that will never die; no—these are the dregs of the Epicurean philosophy, invigorated by the elegant poetry of Lucretius, and revived and circulated afresh in a new and more imposing form by Cuvier, Lawrence, and other *enlightened* men." But we have violated the Spartan rule of our author under this head, and must make amends for our transgression by passing more rapidly forward hereafter. After leaving several intervening species, without remark, we were stopped in the midst of the section on epilepsy by a passage well worthy of preservation from the oblivion to which we fear the volume before us will be shortly consigned. It is stated that "authors and other gentlemen, on the assertion of Suetonius, affirm Julius Cæsar to have laboured under epilepsy." Believing this to be a gross, unfounded calumny, our author proceeds with the boldness of a true knight-errant to its refutation, declaring his motive to be "the respect he entertains for the memory of so great a man." "I am happy to state," says he, "and the subjoined passage, extracted from a very old and accurate edition of Suetonius, will show, that Cæsar never had epilepsy, but only two fainting fits, 'inter res agendas,' and which

Suetonius, not a medical man, has ignorantly called the morbus commitialis." He proceeds, "no person will be surprised to hear that the 'foremost man of all this world, was used to be terrified during sleep, or twice fainted in a crowded assembly from a *disordered stomach*, who remembers that Cicero mentions, in his oration for king Dejotarus, that Julius Cæsar took an emetic after eating; and when he recollects that supper was the principal meal of the Romans, at which they ate heartily, and fed coarsely, he will not be surprised at Cæsar's uneasy sleep, or the propensity which every Roman had to dreaming." Julius Cæsar, with a disordered stomach—fainting twice in a crowded assembly, after taking a puke, rather than Julius Cæsar epileptic! Did ever Roman dream of such a choice between charges lodged against a Roman emperor?

After this extract, we are sure our readers will confess themselves completely surfeited with the "Nosological Practice of Physic, embracing Physiology," of Dr. Dawson. They will, therefore, suffer us, without a murmur, to leave the remaining orders unnoticed, and we can assure them, that in doing so, we deprive them of nothing worthy of their attention—nothing which they have not hitherto known, even though they may have fallen far short of twenty-eight years of experience. The last order is entirely superfluous, as there is not a species included in it which can justly be considered as being, in any respect, more a disease of *function* than many which are arranged under the preceding orders; there is, indeed, in the whole of this system of "Nosology constructed for the author's own use," and in the mode of treating its details, a puerility which would discredit an inaugural dissertation.

Of the "*classical*" department of this work, as our author terms it, our readers can form some idea from the specimens presented, both as they display his style and his selections. Of the observations termed physiological, they are also able to form some conception. Blumenbach is the author most fre-

quently referred to, we suppose, in consequence of his being fresh in the writer's memory while inditing his work. Yet it is presumed, saith the experienced Dr. Dawson, that "it will not be insinuated he (Blumenbach) taught me physiology, since I have studied it above twenty years, and have only been acquainted with his work five months. If I preserve comparative silence respecting other men, it is not that I am ignorant of their publications, but only that I cannot subscribe to their incongruous hypotheses, illogical doctrines, and inconclusive experiments." Of facts and observations connected with *pathology*, we have found a still greater deficiency than in the other departments comprehended in the promises of the author. The remarks offered on spasm and debility, under the head of fevers, have been already noticed, and, on the same subject, still more may be found interspersed throughout the volume. While speaking of hydrocephalus, he again introduces the latter, as "a bugbear,—the Circe of fevers, which has been more hurtful to suffering humanity than earthquakes to the physical world," and remarks, that "a name, and that name all a lie, has too often been the innocent cause of conducting numbers to the tomb." In the last observation, we agree entirely with the Doctor, though his phraseology does not exactly hit our fancy. We could have wished that he had himself been more completely under the influence of a contempt for *names*, when it first entered into his imagination to construct a nosology for his own use. We should then have been spared the unpleasant task of reviewing labours which we cannot acknowledge have yielded us any thing more than *names*.

Practical facts might have been expected to occupy a considerable portion of the work. Such, however, is not the case. The treatment of almost every form of disease under the respective orders, is comprised in the employment of the lancet, of cathartics, and of opium, with a few unimportant succedanea. On the author's observations on the divine influence of opium, in giving birth to the bright effusions of

the poet, and the commanding eloquence of the orator, as well as his advice to employ it with unreserved freedom in various morbid affections, we should feel it our duty to offer some remarks, did we think it at all probable that the work containing them would be generally read. As we are confident this will not be the case, we need prepare no antidote against the injury likely to arise from counsel so injudicious, and eulogies so extravagant. With this remark we take leave of the author and his offspring. To our *readers* some apology may be due, for having thus intruded upon them the contents and character of a work which we had found to be wholly unworthy of their consideration. But one reason need be given for the course we have pursued. It is a truth, established by every day's experience, that though, as a nation, we are charged with being destitute of taste, though we are ridiculed for catching with avidity, and without discrimination, at every production coming from abroad, there are still individuals found among us who will read, and booksellers, as a consequence, who will import, the veriest trash bearing the title of a work on scientific or other subjects, while the labours of our own countrymen remain unnoticed and unrewarded. To remove this evil, and wipe off this blot from our character as a people, should be the aim of every American journalist, and more especially the object of every American reviewer. And how can this be effected more certainly than by exposing the weakness of those who affect to despise us for our weakness?

Such a cause must lead our readers directly to the conviction that the progeny of dullness can gain nothing by a voyage across the Atlantic; and to the determination by no means to encourage it to leave home. Such have been our views throughout the present article. If we have appeared harsh or ungenerous, let the character of the work be examined before we are condemned for that harshness and want of generosity. We fear no contradiction when we assert, that, at least on this side of the Atlantic, no volume on medicine has appeared for the last twen-

ty-eight years, which more deserved the lash than the "Nosological Practice of Physic, embracing Physiology," by George Pearson Dawson, M. D.

ART. V.—*A New View of the Infection of the Scarlet Fever, Illustrated by Remarks on other Contagious Disorders.* By WILLIAM MACMICHAEL, M. D. F. R. S. &c. &c. pp. 100. London.

THIS volume commences with the very interesting remark, that in England the rate of mortality has been greatly diminished within the last forty years, and the author has adduced several very plausible reasons for this circumstance, some of which reflect great honour upon medical science.

There are many who are inclined to scepticism with regard to important truths, and a sufficient proportion of them affect to doubt whether medical art is really beneficial to society, either in augmenting the number or in prolonging the existence of its members. Theoretical argument, however well founded, avails but little against the suppositions of prejudice; nor will a few examples of the obvious success of medical interference, establish its claim to general utility, with those who require evidence that the physician has not in as many instances abridged, as he has prolonged the term of human existence. But, happily, we are not confined to arguments drawn from selected cases, nor to any partial view of the subject, for the purpose of demonstrating the general utility of medicine. In the work before us, its influence upon the rate of mortality of a large nation, during a period sufficiently long to include a fair proportion of all the vicissitudes of health and disease, epidemics and accidents, and disorders indigenous to the country, and we find that within forty years the ravages of disease have been diminished nearly one-third. "In 1780," says our author, "it was calculated that one person in forty (in England) died every year; whereas, itá ppears from the very valuable statistical work* lately published by

---

* Population and Parish Registry Returns for 1821.

order of the House of Commons, that in 1820 the annual mortality was only one in fifty-eight."

"This increase in the duration of human life is attributable to various causes, among which the most prominent are, the better food and clothing of the poorer classes, the more temperate habits that prevail pretty generally throughout all orders of society, the entire disappearance, or mitigated severity, of many fatal diseases, the substitution of vaccination for the small-pox, and the improved state of the practice of physic.

"It is obvious that whatever effect the last mentioned cause has produced, will be visible chiefly in the better treatment of those diseases which have been called epidemic, and which attack great numbers of persons at one and the same time. It must be confessed, however, that without any apparent satisfactory reason, some maladies have become less common now than formerly, of which rickets and scrofula are the most remarkable; on the other hand, gout, consumption, palsy, and lunacy have increased in fatality. Sudden elevations and depressions of fortune, with the corresponding anxiety and eagerness consequent on an excessive spirit of mercantile speculation, may explain the greater frequency of mental diseases; while sedentary trades and professions; nay, even temporary fashions and customs in dress, must necessarily affect the habits and character of the constitution.

"The indulgences and vices of civilized life naturally account for the greater prevalence of the gout: as to palsy, its increase may probably be fairly enough attributed to the less general use of blood-letting, a practice that was formerly much more commonly employed than it is at present. Twice a year, at what was called the spring and fall, persons at a certain period of life were in the habit of losing blood; and even for the slightest ailment, as a pain in the finger, without any reference to a threatened fit of apoplexy, bleeding was resorted to.

"The obvious causes of all those disorders affecting great numbers of persons at the same time, are bad or deficient diet, noxious exhalations of the earth, contagion, and the general influence of climate, or change of seasons. Any controlling power which we may be able to exercise over these causes will ameliorate the condition of society, and necessarily increase the value of life. Improvements in agriculture, by furnishing a greater abundance of the necessaries of life, counteract the first of these causes. The enforcement of a strict quarantine* has entirely succeeded in banishing one of the

---

* "That we can rely on nothing but the strictest quarantine for our exemption from the plague, is proved by the appearance of that calamity in the island of Malta, in the year 1813, when it was imported from Alexandria. The improvements of modern civilized society are, at Malta, in their full force; it is in the possession of one of the most polished nations of the

most formidable of the contagious diseases, viz. the plague; and the *universal* practice of vaccination would as certainly completely exterminate the small-pox. For it has been well observed, with respect to inoculation for the latter disease, that the partial benefit derived by those who undergo the operation, has been overbalanced by its favoring the casual propagation of small-pox, an objection that cannot be made to vaccination

"If it be impossible to get rid of the other contagious diseases, still much good has been effected by disarming them of their violence. Ventilation, the free use of external cold, and the bold administration of purgatives, have contributed much to lessen the severity of typhus, the measels, and scarlet fever."

Our author proceeds to give characteristic sketches of those eruptions which resemble scarlet fever, and which are sometimes confounded with it. The small-pox and measles, he observes, are those which are chiefly apprehended, particularly the latter, because for the former, although the most formidable, we possess a preventative in vaccination, and there is a well founded hope that it will in time become utterly extinct. But we know of no means calculated to fortify the system against the contagion of measles. It is consequently advised, as it is a disease which appears but once in the same person, that children should be exposed to it during a favourable season, after having been prepared by the exhibition of a cathartic. Dr. Home of Edinburgh has attempted to introduce the practice of inoculation with this disease; but the advantages likely to arise from it are not such as will bring it into general use.

"The symptoms of the small-pox," our author observes, "as well as those of the measles, are so obvious and so decided in their external appearance, that little or no doubt can exist as to the fact, whether a person has undergone these diseases or not; but scarlet fever is so various in its character, and there is one form of it so extremely mild, that it does most certainly sometimes pass through the system unobserved, and in many more instances under the name of a *rash*, exciting no alarm, and requiring no medical treatment."

---

world; but all these advantages were insufficient to prevent the fatal and wide spreading ravages of the plague, when once introduced into the island."

Dr. Macmichael thinks that the true reason why children are supposed to be more liable to scarlet fever than old people, may be found in the last mentioned fact, namely, that those adults, in many instances, who think that they have never been affected by it, may, nevertheless, have been affected by this disease during infancy, in one of its milder forms, in which it escaped observation.

"There is sometimes in schools what is called a *rash*, a redness of the skin, of various extent and brightness, occasioned by an unusual quantity of blood distributed to that part. Nothing else, perhaps, is taken notice of; the rash passes off without observation, or if it should happen to be for a moment imagined to resemble, in the smallest degree, that alarming disease, scarlet fever, the suspicion is instantly checked, and the whole matter hushed up as quietly and discretely as possible. Now I am anxious to direct the attention of the public to this point; from a judicious practical application of which, I think, much advantage may be derived.

"It has been long indisputably established that the slighest of all eruptive fevers, viz. simple scarlet fever, and that most fatal disease, the malignant sore throat, are varieties only of the same disease, and proceed from the same contagion. That the scarlet fever, like the small-pox, is, in some rare cases, to be had twice, will not be denied, though the *proportion* of such instances which is assigned by Dr. Willan, is, perhaps, unusually small; for he asserts that, in two thousand patients, he had *never seen a repetition* of the disease; that is, that those who have once had the mildest form of scarlatina, have not afterwards suffered the malignant sore throat. It may, however, be safely affirmed, that scarlet fever does not occur twice, more frequently than the other specific contagions, consequently no argument can be founded on such an anomaly."

Dr. Willan is of opinion, that measles, in a very mild form, may occur unattended by fever, and that after the eruption has disappeared, even after the lapse of two years, the febrile symptoms belonging to the disease may be manifested.

Dr. Macmichael, however, does not think that this is true rubeola, but that this mild eruption is nothing more nor less than scarlatina, which not having the power of destroying the susceptibility of the system of the contagion of

measles, this latter disease may, consequently, occur at any period subsequent to the existence of the former.

Our author, however, admits that much difficulty sometimes exists in distinguishing between the eruptions of rubeola and scarlatina; and it is probable that it is owing to their having been confounded with each other that the bills of mortality, during one year, attributed one-thirtieth of the deaths to measles; and, in another, only one in four thousand. It may be objected, he observes, that the identity of scarlatina in its mildest form, is not susceptible of satisfactory demonstration; and that it sometimes affects one member of a family without being communicated to others; and further, that one of a family may have this slight eruptive disease, and others be afflicted, at the same time, by more violent and well-marked scarlatina. This argument, however, does not appear to us to militate, in any important degree, against our author's opinion, that scarlatina does exist in this very mild form. It is, perhaps, impossible to find two constitutions in all respects similar, even in the same family—hence, nothing is more reasonable than that different individuals should be variously affected by the same morbific agent. The matter of contagion may produce a disease more or less violent; or one or another symptom may predominate, so as to hide the identity of the nature of a number of cases from superficial observation.

Our author proceeds to detail the symptoms of this disease in its more aggravated form.

"In the scarlatina anginosa, in addition to the fever and efflorescence, a considerable swelling of the tonsils takes place, beginning sometimes with the febrile accession; at others, not perceptible till the scarlet eruption is at its acme. A stiffness in the muscles of the neck and lower jaw is felt at the very beginning of the attack. On the second day of the fever, the throat feels rough and straightened, the voice becomes hoarse, and deglutition is not performed without pain and difficulty. On the two following days, head-ache, vomiting, delirium, great heat of skin, quick respiration, a

small pulse, extreme languor and faintness come on. Upon examination, a considerable enlargement of the tonsils is discoverable, with a florid redness which extends over the neighbouring parts. The colour of the tongue is deeply red, and the papilæ over the whole of its surface are greatly elongated.

"All these symptoms are much aggravated in the other or most malignant form of the disease. Aphthous ulcers in the throat are visible, sometimes on the very first day of the fever: the sores are numerous, deep, and sordid. The patient becomes hoarse and almost dumb. Sometimes the whole skin is intensely red at the commencement of the distemper; at other times only the breast and arms have this colour. On other occasions, the efflorescence has not been observable before the fourth day of the fever, and in many patients it is scarcely or never perceived at all. The condition of the sores is to be considered as indicating the danger of the disease, which must be judged to be greater in proportion as these ulcers occupy a larger space, are deeper, more firmly fixed, and of a more gangrenous hue. In fatal cases the patient becomes, on the second day, comatose, breathes with great difficulty, bending back his head as far as possible: at the same time, a purulent and highly offensive matter flows from his nostrils; the throat, on inspection, is found to be gangrenous, and death soon follows:"

In speaking of the treatment of scarlatina, the author makes the following judicious observation, which is capable of very extensive application in medical practice.

"The two great improvements in modern days, in the management of febrile diseases, consist in the discovery of the powerful influence of diminished temperature, and the beneficial effects of purgative medicines; and in none are the advantages resulting from the use of these remedies more evident, than in their application to the treatment of scarlatina anginosa."

Sponging the body, generally, with cold water, or with vinegar and water, is consequently recommended. But a few years have elapsed since the employment of cold water in febrile diseases, whether externally or internally, was most carefully prohibited, and, notwithstanding the mass of testimony by which it is now recommended, this practice is still looked upon, by many, as at best a dangerous experiment; and there are many among our most intelligent

practitioners who dread the application of cold water, particularly in eruptive diseases. Dr. Macmichael, however, speaks of this practice in the language of one who is not aware that it can be on any account objectionable—he merely advises that it should be employed "only when the skin is hot and dry."

"The dread of the employment of purgative medicines," our author observes, "has now in a great measure subsided; and their cautious use, even in the worst forms of cynanche maligna, has been recommended by some of our most popular medical writers. Formerly it was laid down as a rule of practice in the malignant sore throat, to avoid all purgatives till towards the end of the fever; and if a spontaneous diarrhœa came on, to check it as soon as possible.

It was supposed that purgatives served to diffuse the acrid matter, descending from the throat into the stomach, over the whole surface of the intestines, and thus increased the source of contagion, and aggravated the irritation which arose from the presence of this deleterious matter. But the moderate and free evacuation of the bowels, by a few grains of calomel, combined with rhubarb or jalap, so far from causing the mischievous effects we enumerated, will expel the acrimonious and offensive mass, and instead of increasing the debility, will relieve the symptoms of general fever, and, united with the cooling treatment above insisted upon, most materially expedite the cure of the disease.

Acidulated drinks are extremely grateful; a few drops of *oxygenated muriatic acid* diluted *in* water form, perhaps, as agreeable a refrigerant as can be contrived."

We perfectly agree with our author that acidulous drinks may be both agreeable and salutary, in the disease under consideration; and although we possess a great variety of substances from which these drinks can be composed, we must, nevertheless, regret that we have never met with the particular acid which Dr. M. prefers and has named above. There is a gaseous substance which once bore the name of oxygenated muriatic acid, but as it does not possess any property of an acid, Dr. M. cannot allude to it; at least, we presume, not from his experience in its use.

Epispastics are also recommended, particularly with a view to diminish the quantity of acrid mucus secreted by the inflam-

ed tonsils; and gargles, also, for the purpose of washing away this offensive matter, which otherwise would pass into the stomach and probably give rise to distressing diarrhœa. Ultimately, when all the febrile symptoms have disappeared, our author recommends the exhibition of cinchona to confirm the health and restore the strength of the patient.

We regard the present work as one well calculated to excite our attention to the distinguishing marks of those diseases, many of whose more prominent symptoms are so analogous as to occasion their indiscriminate diagnosis. Dr. Macmichael has, in the course of his "view, &c." given us good reason to believe that scarlatina, rubeola, urticaria, and occasional cutaneous eruptions arising from gastric irritation, have been confounded with each other, much to the prejudice of correct pathological description. T. M. H.

ART. VI.—*A Treatise on Syphilis; exhibiting the advantages of large doses of the sub-muriate of mercury in the cure of that disease: also an inquiry into the modus operandi of mercury. Illustrated by experiments.* By JAMES BOYLE, Esq , one of the Surgeons of the United Institution of London and Westminster, for the treatment of lying-in women, and children, &c. &c. London, 1824. 8vo. pp. 166.

IT has of late been quite fashionable to decry the use of mercury in venereal affections. Its baneful consequences have been set forth in all quarters—in books and in occasional essays—in the lectures of professors, and in conversation—every where the alarm has been sounded, concerning the pernicious influence of this metal. But the tide now begins to roll back—and mercury is again looking up to take its former station in the list of anti-venereal remedies. Whatever may have been urged against the employment of this article in venereal diseases, we feel persuaded that it will long, and perhaps ever, remain the most important and effectual remedy in affections of this kind. It must be acknowledged, however, that though a powerful and a safe remedy, when properly

managed, its abuse or improper administration is calculated to do much mischief;—and this, indeed, can be said of every important article of the materia medica. If we are not greatly deceived by what we have ourselves seen, we would say that the author of the book before us, has recommended this remedy in a way, which, in the majority of cases, is not only unnecessarily liberal, but also calculated to do much injury.

The author commences by objecting to Hunter's doctrine concerning the incompatibility of two diseases in the system at one and the same time. The reverse of Hunter's opinion is indeed now pretty generally acknowledged by medical writers. The author has seen the epidemic cholera of India attack patients whilst under the influence of mercury, for the cure of chronic dysentery; and where, consequently, these distinct diseases existed in the same person simultaneously. He is averse to the opinion entertained by some that gonorrhœa and chancre are diseases specifically the same.

"It is exceedingly probable," he says, "that when chancre appears to produce gonorrhœa, and gonorrhœa chancre, the matter in either case is mixed. It is no uncommon thing for a woman to give gonorrhœa who never felt a symptom of the complaint herself. Under such circumstances, we believe the poison had remained in a quiescent state in the vagina. It is perfectly possible, then, for a woman in this state, having a chancre or chancres in addition, to communicate one or both the diseases."

Dr. Boyle thinks that in all cases of true venereal chancre, the disease is constitutional before it appears as a local affection: "that is to say, that absorption of the poison had actually taken place, previously to the ulcerative process: and that such a change in otherwise healthy parts, is a proof of the constitutional affection, and not a cause of it." He is also of opinion that no bubo can be considered venereal unless it be attended by a sore. The arguments by which he endeavours to sustain these positions, are however far from being satisfactory. If the diseased action were not constitutional before it appears locally, says he, "we should have

chancres making their appearance almost immediately after the act of coition with an unclean person, and not at the expiration of days and weeks as is generally the case." But if the disease is always constitutional before it appears locally, how are we to account for the fact, that a purely local treatment of the chancre, on its first appearance, will generally put a stop to the progress of the disease? Certainly, were it *ab initio* constitutional, the destruction of the local affection, however early practiced, could not eradicate the constitutional affection. It is unreasonable to expect to remove a disease merely by removing one of its effects.

He states that he has never seen a bubo that came on without a sore at the time, or soon after, which required mercury for its removal. We have seen some cases from virulent gonorrhœa which resisted every attempt at removing them, until mercury was administered; and we have no doubt that the majority of physicians who have had sufficient opportunities of prescribing in this disease, have met with similar cases. It must nevertheless be observed that the removal of a disease by mercury, after it has resisted other means, is no proof of its being venereal.

The author next enters upon an examination of what is now called the new practice, that is, the non-mercurial treatment of this disease. He shows that there is nothing new in this mode of managing the complaint, and that it was well known and practised more than three hundred years ago. He "is quite satisfied that in the East Indies, the natives cure the disease without the use of mercury. They are in the habit of giving some sudorific vegetable composition, during the administration of which the patient is confined to his house or hut, for the purpose of warmth." Still he contends, that the employment of this remedy is decidedly the most certain, safe, and expeditious mode of treating the malady.

"I think," says he, "the writers in favour of the new practice, as it is called, have themselves given evidence whereby to condemn it; for admit-

ting the point of contention, that the disease may be cured without mercury, what man, in his *sober senses*, would feel disposed to suffer a chancre upon him from one to three months, with the additional prospect of being soon after a still longer time under medical discipline, for what usually follows, ulcerated sore-throat, copper-coloured spots on the skin, nodes, diseased bones, &c. &c.; when, as I propose to prove, the complaint, in the first instance, may be radically cured in a few days!"

Bubo.—Bubo, or swellings in the groin, may arise from various causes, and it is of much importance to attend to this circumstance in prescribing for their removal. It may arise from cold; from any violent exertion, such as jumping, dancing; from the irritation of a *corn*, and from cutting too closely one of the toe nails.

The author says, "I had a patient some years ago who presented himself with a sore on the *penis* and two buboes. He declared most solemnly that he had not had connexion for nearly two years, and that it was not possible this could be venereal: he was a sailor, and therefore did not say so from delicacy. I confided in his statement, pointing out to him the impropriety and danger of deceiving me: I dressed the sore simply, and endeavoured to discuss the tumours. What appeared to be a chancre healed in a few days; but the swellings in the groin suppurated, in spite of all my efforts to the contrary. It was nearly seven weeks before this patient was cured. I saw him about twelve months after, and there had not been the slightest appearance of secondary symptoms. Here, had I been less credulous, this poor man would have been doomed to a tedious course of mercury, to say nothing of the consequences attending it!"

The author does not think it necessary, in the treatment of chancre, accompanied by bubo, to continue the mercury till the disappearance of the tumour. In this opinion we perfectly agree with him, and think the observation worthy of particular attention. Indolent buboes, he thinks, are best treated by hot applications. "Experience," he says, "has taught us that warmth does not always favour the process of suppuration. On the contrary, it is well established, and I believe the idea originated with Mr Brodie, that heat will invariably direct its influence to the course upon which nature has determined; and that it will expedite that process, whether it be resolution or suppuration." In stationary tumours of this

kind, camphorated mercurial ointment, or camphorated spirits, applied *with a bandage moderately tight*, is perhaps the best application we know of.

Sloughing or Phagedenic Chancre.—The author does not describe the appearances and character of this species of venereal ulceration. He confines his observations altogether to its remediate treatment.

"The whole of the local disease," he says, "consists in a diminution of vital action, or vital energy, in the absorbents and minute blood vessels." Hence, almost all practitioners agree that stimulating applications, such as hot fomentations or poultices, camphorated spirits, alcohol, &c. &c. are the most useful. Internal stimuli, also, are generally considered as indispensible. The author recommends in strong terms large doses of mercury. "I have seen large doses of the sub-muriate of mercury," says he, "cause a line of separation between the sound and unsound parts, when various lauded remedies proved to be entirely useless."

"In a venereal sloughing ulcer," says the author, "we have two objects in view; one, to stop the progress of a local affection; the other, to eradicate a systematic or constitutional disease, of which the former is symptomatic only. If both these circumstances can be effected at the same time, no one surely will object to the propriety of the measure: this, on the contrary, should be the grand object; and analogy, I think, bears me out in a confident opinion, that large doses of the sub-muriate of mercury are best calculated to effect those important and especial purposes."

Large doses of mercury are, according to our author, much less apt to do injury in scrophulous habits than small ones.—This he predicates not only on the result of his own experience, but also on the alleged fact, that this medicine acts most as an irritant when the system is brought under its influence by means of small than by large doses.

Modus Operandi of Mercury.—The author objects to Hunter's opinion that the remedial powers of mercury in this disease are in any way to be explained on the principle of evacuation. Hunter adopted this opinion from observing that eva-

cuations generally do not effect a cure. "This," says our author, "is a hasty and inapplicable conclusion."

"The complete revolution," he continues, "which takes place in the system during the state of ptyalism, by an increased action in all the secretory and excretory organs consequent to this state, are of a very different nature from that kind of evacuation which is the mere result of a simple purgative; and which, by way of distinction from all others, might properly enough be termed the *specific mercurial evacuation*. It is not till after the salivary glands appear affected by mercury, that any rapidly favourable change takes place in chancres. During the first few days of administering the medicine, it is almost invariable to observe slight febrile symptoms, and a greater degree of irritability in the sores. But when the salivary glands are affected, the last and most important functional change which the mercury is capable of inducing, we find the general irritation greatly lessened, and the sores then heal rapidly."

The fact that many cures are effected with this remedy without the salivary glands being in the slightest degree excited, is not to be received as a proof that this article does not produce its remediate effects by exciting evacuations. It is true, says the author, that we often see morbid states of the system changed by a few alterative doses without affecting the mouth. "In such cases, if minute attention be paid, an increased action may be witnessed; whether proceeding from the emunctories of the skin, from the liver, the kidneys, the intestines or the stomach; and as this effects purposes not within the powers belonging to common diaphoretics, dioretics, purgatives, or stimulants of any kind, it must be attributed to a specific mercurial evacuation, however that evacuation be effected.

The author, therefore, believes that the modus operandi of mercury, in the cure of diseases, is by exciting a *specific evacuation.*

"The assertion," says he, "is demonstrable that mercury acts in the cure of the venereal as it does in the cure of every other disease, namely, by keeping up an increased action of the glands, whereby a more than ordinary secretion is carried on, till the system becomes freed from poisonous, extraneous, or irritating matter, whatever be its nature, or however it be induced."

His arguments, however, are by no means sufficient to sustain this opinion. That the emunctories generally are excited by this remedy, is unquestionable, but that the cure is mainly or in any degree dependent on the evacuation thus produced, is exceedingly doubtful. The new action throughout the whole capillary system which this remedy produces, and upon which the augmented secretions depend as an effect, is in itself sufficient to account for its remedial impressions. If mercury cures a disease more rapidly when pushed to the extent of producing salivation, it is not because a greater evacuation is effected, but because the specific excitement, throughout the system generally, is more intense, and consequently more apt to overcome the diseased action, for the removal of which the remedy is administered.

The following observations, favourable to our author's sentiments on this head, deserve attention in a practical point of view:

"It frequently happens," he says, "in *advanced* stages of this disease, that mercury is administered as our only hope; and affecting the system by means of it, is the object in view; when, if ptyalism, or a flow of saliva be excited, the patient almost invariably recovers; but if, on the contrary, a *sore mouth*, that is to say, ulcerated gums, &c. take place, and that it is impossible to establish ptyalism by perseverance in increased quantities of mercury, there is, I believe, no hope of the patients' recovery."

Under the head of *anomalous effects of mercury*, the author makes the following observation, which we have seen verified in several striking instances:

"It sometimes happens, that a very violent salivation breaks out suddenly in cases which had long previously resisted mercurial action: this circumstance, however, can generally be traced to some evident cause; such as after exposure to the open air, free living, and much exercise, the patient, whether from necessity or choice, changing his habits for a more steady life, and confining himself to bed, or an apartment in which the air was close. Of the truth of this the following are striking illustrations:

"A gentleman, some years ago, was under my care in the Mediterranean, for the cure of a venereal affection. He was a free liver, and took much exercise on shore; and although he had been taking mercury for fourteen weeks, yet its action upon the salivary glands and upon the disease, was per-

ceptible only. At length, being obliged, from debility, to confine himself to bed, a violent and sudden ptyalism took place, and the venereal symptoms immediately disappeared.

"Subsequently to this, in the East Indies, a gentleman came under my care for the cure of a severe hepatic affection; his former medical attendant had given him mercury to a great extent without being able to affect his mouth, or bring about any change in his complaint. I confined him to bed, when almost immediately a copious ptyalism was the result, and his disease as quickly ceased to be an inconvenience."

The author thinks that the symptoms which Pearson points out as presaging a fatal result, will never arise from this remedy, if the system be suddenly put under its influence by large doses. "It is only from reiterated action," says the author, "of the nervous upon the vascular, and the vascular upon the nervous systems, and that by long continued small irritating doses, that mercury acts as a poison, gradually unhinging all the important organs, till, at length, the vital spark is annihilated."

The author observes that large doses of calomel never cause violent purging.—It is certain, that the cathartic effects of this medicine are seldom proportionate to the size of the dose, and that five or six grains will in general produce as much catharsis as twenty or thirty. "The purgative effects of this medicine," says he, "appear to decrease in a given ratio after eight or ten grains." He further states, that violent ptyalism "is infinitely less common from large doses of calomel than from a protracted course of mercury, in whatever form exhibited." This may be the case in some instances, but, as a general observation, it is by no means correct. Some of the most violent cases of ptyalism which we have seen, and we have seen some uncommonly violent, were produced by large and repeated doses of calomel. The fact, however, appears to be, that the degree of ptyalism depends more on the degree of susceptibility of the system to the action of this remedy, than on the quantity introduced into the system.

Where ptyalism is excessive, the pure acetate of lead, applied by means of a hair pencil, is said to be very serviceable. Tar has also been recommended as an efficacious application to ulcers of the mouth from mercury.

Experiments illustrative of the operation of Mercury.—The author details six experiments under this head, which give us no other information than that dogs may be killed by stuffing them liberally with calomel! This "important result," as he calls it, convinces him that mercury does not kill in the manner of a poison, but simply by producing a total indisposition to take food,—that is by inanition!

Preparatory measures to the administration of Mercury.—Blood-letting, where the pulse is full and active, is an important preparatory measure to the exhibition of this remedy. The author explains the modus operandi of blood-letting, in this respect, as follows:

"When an increased action in the blood-vessels and consequent distention takes place, diminution of diameter of the absorbents, or obstruction from pressure of the surrounding vessels, if not diminution of diameter, will be the consequence in certain parts of those vessels. And the fact of blood-letting under circumstances of plethora and febrile irritation so quickly influencing the operation of mercury, whose powers had been previously resisted, stands forward, I think, as an incontrovertible testimony of the reason of the causes to which I have assigned this particular result. As might be anticipated, *a priori*, the distended vessels being unloaded by the operation of venesection, full play is permitted to the absorbents: the veins, too, which from the late discoveries of Magendie, we know to possess an absorbent power, are, when thus relaxed, enabled to perform their additional function."

The absurdity of this explanation is so evident, that it scarcely needs any notice in this place. If blood-letting, as a promoter of the action of mercury, acted simply by removing mechanical pressure from the absorbents and veins, then we should find debilitated and nearly exhausted persons exceedingly susceptible of the specific influence of this medicine. That this is not the case, however, every practitioner must be convinced from his own experience.

The mode of administering Mercury.—The author, as we have already stated, advocates the propriety of administering this remedy in *large* and frequent doses, so as to put the system under its influence as speedily as practicable. "Nothing," says he, "can be more glaringly inconsistent than the practice of administering small and ineffectual doses of mercury in the cure of venereal, allowing the constitution to become habituated to its use, and consequently insensible to the action of the specific, whilst the disease and debility are extending with destructive strides."

"If, for example," he continues, "two patients, under precisely the same circumstances, entered on means of cure at the same time; the one shall be put under a five weeks' course of mercury, so conducted as to make the mouth sensibly affected at the end of that time, at which time also, his sores or other venereal symptoms shall have disappeared. The other patients' mouth shall be affected in two days, his sores heal in four or five after, and the salivary glands continue in a state of excitation for six or eight days more. I ask, which of these patients is likely to suffer most from the effects of the disease and the remedy? Assuredly, if we admit the venereal disease to be capable of acting upon the constitution generally, we can have no hesitation in saying, the sooner that power is destroyed the less injurious will be its effects on the constitution; and the reverse of this on procrastination."

The author then adds a number of cases illustrative of the utility of administering large doses of calomel. We extract a few of these cases:

"A gentleman consulted me on account of a sore, situated behind the corona glandis, on the right side of the penis, and extending to the frenum, which, by a destructive process, it finally destroyed. This sore was the almost immediate consequence of an imprudent proceeding, and had been increasing in size and malignity of appearance till the time of my seeing it; a space, to the best of the gentleman's recollection, of nineteen days. There was every characteristic mark of true venereal chancre about this sore, and which, added to the circumstance of the subject of his amour, left but little doubt as to the nature of the disease. An attempt, however, was made to heal the sore by dressings, quiet, and other means likely to effect this under ordinary circumstances, but in vain, without

mercury. It was unusually difficult to affect this gentleman's system, *eight scruple doses* of calomel being necessary to induce ptyalism, and effect a cure. The sore, in consequence of a scorbutic diathesis in the system, underwent many changes, requiring the aid of various local applications, and the occasional exhibition of an opiate: he was eighteen days under cure. A short time back, this gentleman had occasion to put himself under the care of a practitioner in London, for the cure of a recent infection. On this occasion, he was treated by the common mode of administering mercury, and his sores were about seven weeks in healing, although his general health was then good.

"James Sparks, seaman, entered the sick-list for the cure of a chancre—it had commenced about fifteen days previously. January 30th, prescribed calomel, gr. xxv., to be taken in the evening. 31st, two copious alvine evacuations; gums painful, and evidently swelled. Repeat the dose. Feb. 1st, spits freely; no alteration in the sore. 2d, mouth more affected; sore begins to heal at its edges. 3d, still spits copiously; sore healing rapidly; has had no alvine discharges. Ordered sulph. magnes. 4th, bowels open; sore almost healed. 5th, sore healed. Tenderness of the mouth continued till the 13th.

"Samuel Filley, with venereal chancre on the *corona glandis*, took, on the 24th August, ℈j of calomel—this produced three evacuations from the bowels. 25th, mouth sore; 27th, ulcer much cleaner, and commencing to heal; gums much affected. Sept. 2d, calomel, gr. xx., with opium gr. iss. 7th, sore healed."

In a letter, addressed by Dr. Reid to the author, there are several cases mentioned which afford striking evidence of the advantages to be obtained, in some violent cases, from a prompt and vigorous mercurial treatment. Dr. Reid mentions a case that occurred to him in the Mediterranean, which he at first attempted to cure without mercury; "for some time things went on very well; the sore was nearly healed, when all at once, at least within twelve hours, the sore assumed a sloughy appearance, and, in twenty-four hours more, the most malignant ulcer, emphatically called *black lion*, became fully established, without any apparent deterioration of the patients' general health." Various powerful means were employed to arrest the progress of the ulceration, but without any advantage. Dr. Reid finally administered thirty grains of calomel, and had mercurial ointment rubbed into both

thighs.—"In the evening, the ulcer looked truly frightful:" —two scruples of calomel were given, and mercurial frictions continued; the ulcer was dressed with calomel and a carrot poultice. Next morning, the sore looked better—brassy taste in the mouth—bowels but once moved since he took the calomel. The ulceration was arrested, and healed in a reasonable time. "In this case," says Dr. R., "I remember very distinctly, that so far from the large doses of calomel exciting violent purging, they only produced one motion; their action was decidedly and directly sedative; and it afterwards required brisk purgatives to restore the intestines to their healthy action." Dr. R. mentions another case of a similar character, in which he was obliged to give five *scruple doses of calomel* in twenty-seven hours, before the phagedenic ulceration could be checked. We have ourselves seen phagedenic chancres arrested in their destructive progress by large and repeated doses of calomel. We have given three scruple doses in twelve hours, and in twenty-four the good effects on the disease were manifest. Even in ordinary venereal chancres we have lately administered at once, in the beginning, several large doses of this medicine, and have had the satisfaction to see them heal speedily.—We would not, however, advocate this practice in the usual cases of this disease.—These may in general be readily cured by local escarotic applications, in their commencement, and an alterative mercurial course in their more advanced stages, without subjecting the patient to the disagreeable effects of salivation.

ART. VII.—*A Treatise on Stricture of the Urethra; designed as a Manual for the treatment of that complaint; and addressed chiefly to students and junior practitioners.* By GEORGE MACILWAIN, Member of the Royal College of Surgeons, &c. &c. Octavo, pp. 138. London, 1824.

THIS is an excellent little work, and contains more good practical matter than can usually be selected from a much larger number of pages. In our analysis of it we shall, therefore, be enabled to present to our readers some useful and interesting information, although, perhaps, nothing of a very novel character can be pointed out in the whole treatise.

The most frequent situation of stricture is, according to our author, in that part of the membranous portion of the urethra which is immediately posterior to the bulb; the next is immediately anterior to the same part. From this point forward every part is liable to contraction, but not equally so. The external orifice is but seldom affected with stricture, while that portion of the urethra which is the seat of gonorrhœa is very often contracted—indeed, according to our experience, more frequently than any other part of the whole canal. Our author thinks that the cavity of the bulb is never constricted, and he asserts that the prostatic portion of the urethra cannot be diminished by this disease. He might have observed, however, that an enlargement of one or other of the lobes of the prostate, is capable of so far compressing the parietes of the canal together, as both to impede the flow of urine and obstruct the entrance of a catheter.

The different varieties in the form and extent of strictures are thus accurately described by the author:

"There may be a simple narrowing of a part of the canal, as if a ligature had been thrown around it: the opening by which its different portions communicate being in the centre, or the contraction being irregular, the opening may be placed superiorly, inferiorly, or laterally. In general, the narrowing is limited to a line or two in length; but in some cases it extends much farther, the canal having a continuous diminution in its calibre for an inch or more: and again, there are instances in which the whole tube, from

its membranous portion forwards, has become lessened in its diameter. Sometimes there is a sort of bridle thrown across the urethra; and the impression, in a case of this kind, which is made on a soft bougie, resembles that which would be produced by drawing a piece of fine twine across its point. I have met with several cases of this kind; and if it be not frequently observed in dissection, I should be disposed to account for it by the appearance being, in all probability, destroyed in slitting open the urethra. It does not appear, however, to have escaped the observation of the accurate Morgagni, who speaks* of having found 'fibres and fleshy fibrillæ in the urethra.'

"The change which the mucous membrane undergoes, consists of a greater or less thickening. In some instances it proceeds so far, that no similarity with its healthy condition is discoverable, appearing almost of a cartilaginous texture, whilst in others scarcely any change can be observed; and there are degrees of alteration intermediate between these extremes. Where the contraction is considerable, and the membrane but little altered, there is a thickening produced by deposition exterior to it. The change of structure is generally proportionate with the duration of the complaint; and if this has been very long, the whole of the urinary organs usually become more or less diseased."

It is generally supposed that all strictures result either from some form of gonorrhœa, or from the treatment which is pursued in the cure of that disease. The following observations, however, will serve to show the existence of other causes which occasionally, although by no means so frequently, as our author supposes, do contribute to the production of stricture.

"Peculiarity of constitution predisposes some individuals to stricture; although it is but seldom that we can trace it as unequivocally resulting from this idiosyncrasy, independent of the intervention of local excitement, for reasons which obviously present themselves on considering the functions of the generative organs. As no part of the body is exempt from the influence of general constitutional disorder, so may the urethra become the seat of its local development. In the present state of science it is not necessary to enforce the truth of this proposition by any laboured reasoning. The effects frequently produced by stimulating or other substances taken into the stomach, on the urethra, in persons who have stricture, as well as in those who have not, are objects of familiar observation. The least deviation from their ordinary mode of living will, in some individuals, induce

* Vide Lib. xlii. Sec. 41, et seq.

irritation in the urethra or bladder, where there is no evidence of disease in these organs. Further, all cases of stricture are invariably relieved by a moderate and rational diet, and the symptoms uniformly aggravated by a contrary line of conduct. A volume might be filled with facts and arguments leading to the same conclusion; but at this day it would be a work of supererogation. Habitual abuse of wine or ardent spirits will induce stricture; but, whether by an influence directed to the health in general, or to the urinary organs in particular, it is difficult to determine. There is no cause to which strictures are so frequently referred as gonorrhœa; but whether it exerts so extensive an influence in their production as is generally supposed, may be fairly questioned. Stricture often takes place at a period very remote from the existence of any affection of this kind, and in patients who never had gonorrhœa in their lives, as also at an age which must be altogether exempt from the agency of such a cause. I shall not pursue this subject further, as Mr. Hunter's book contains facts and observations which any candid man must consider as conclusively establishing the fact, that gonorrhœa is only to be considered in common with other causes, though perhaps more frequent than many others. Injections no doubt give rise to stricture; but I cannot agree with Sir Everard Home to relinquish their employment, because the ill consequences which have sometimes followed it I believe to be referable to their having been injudiciously administered. The experience of Mr. Hunter showed that strictures occurred as frequently after gonorrhœa treated without injections as with them; I could readily believe much more frequently, and for the following reason:

"Diligent investigation shows that stricture does not commonly proceed from violent inflammation, but from a sort of irritation, moderate but continued, principally characterized by a morbid increase of sensibility, sometimes attended by discharge. Thus it is found that where stricture can be traced to gonorrhœa, the latter has been neglected, and the irritation, of which the discharge is sufficient evidence, unnecessarily protracted; during which period the patient is liable to sources of excitement which he is wearied with foregoing. No state can be more favourable to the formation of stricture than that to which I have just referred. Injections, therefore, when properly employed, by removing the irritation and discharge, so far from conducing to the occurrence of stricture, become actually indirect preventives of this disease. The consideration of gonorrhœa would lead to a digression; I shall therefore merely mention the principles to which it is necessary to attend in the employment of injections. First, they should never be used whilst there is pain in micturition; 2dly, their quality should never be of such a nature as to produce more than a temporary smarting; 3dly, their strength should be increased as the canal becomes less susceptible; and, lastly, their action should be confined to the seat of the disease. Immoderate indulgence in sexual intercourse is with propriety considered

as a cause of stricture. It is obvious that the continued irritation and excitement to which the organs are thereby subjected, must be very favourable to its production. Calculus in the bladder, enlargements of the prostate, and affections of the rectum, are occasional causes of stricture."

Under the head of "*irritable urethra,*" our author has introduced some important observations. According to him, all strictures are preceded by an irritable state of the canal, the detection of which will lead to the prevention of their occurrence.

"The urethra, however, may labour for a considerable period under this affection before contraction takes place in any part of it, of which I have seen repeated examples. The morbid sensibility which is its principal feature may affect the whole canal, or be confined to one portion of it; in which latter case it is almost invariably situated in that part enveloped by the prostate gland. As the treatment usually includes the occasional introduction of instruments, it may at first appear unnecessary to attempt any other diagnosis than these are capable of affording. But when we consider, first, the great and in many cases the insuperable objection made by patients to the introduction of instruments; 2dly, the difficulty of making them understand how their introduction can be necessary where there is no stricture; and, 3dly, that some cases admit of relief without their employment—the diagnosis becomes important: and although it is confessedly obscure, yet I believe, in many cases, it is to a discriminating practitioner sufficient to enable him to distinguish the two maladies. First, then, with reference to the volume of the stream in micturition. Persons with irritable urethra will occasionally make an exceedingly small stream, yet at other times it shall be of the natural size: now, although in stricture its volume varies considerably at different periods, yet it is never to the same extent; attentive inquiry showing it always to be less than natural. Again; we find also that the diminution has progressively become more considerable, which is not the case in simply irritable urethra. It is by no means uncommon to find patients making water in a full stream after a meal, although previous to this it was exceedingly small, and the urethra so irritable as to give a feeling of strangury—a difference which never happens to the same extent in stricture. Involuntary emissions* are occasionally attendant on stricture,

---

* I have seen very many cases tending to establish this point. This morning I had occasion to examine the urethra of a patient who consulted me a few days since for symptoms which rendered him confident that he had stricture. On his informing me, that since he had employed the mea-

but they are scarcely to be considered as a common symptom; whereas in simply irritable urethra nothing can be more frequent: and I am the more confident that this difference exists, from finding that they are sometimes described as a symptom of stricture occurring at an early period of the disease.* Where these are a leading symptom, the irritation is frequently confined to the prostatic portion, but not invariably, as I have seen examples of the contrary. As far as my observation goes, a greater or less disorder of the general health usually accompanies this affection, whereas in stricture it is frequently by no means so easily discoverable; it would seem as if this farther development of disease had rendered the character of it more local, except indeed where the symptoms have made such progress as to react on the general health in their turn. Irritable urethra, besides giving rise to symptoms somewhat analogous to those of ordinary stricture, will sometimes induce others, which may be considered as the occasional attendants on that complaint. The former we need not mention at present. By the latter, I mean abscess in perinæo, painful enlargement of the testicle, and hydrocele.

The treatment of irritable urethra laid down by our author is so rational, that we need make no other comment upon it, than to observe, that we have been in the habit of pursuing almost exactly the same mode for some years past, with the most decisive advantage and success.

"In the treatment of irritable urethra it should be observed, that there are some cases in which change of air and attention to the general health are alone necessary, and others in which nothing else will relieve the symptoms. In general, however, the treatment consists in the introduction of instruments directed by a principle not altogether previously unknown in surgery, but first applied to the urethra, as I believe, by Mr. Abernethy, to whom the Public and the Profession are otherwise so much indebted. This consists in diminishing the morbid sensibility of the canal, by habituating it to the mechanical stimulus of an instrument, on the same principle as we do ulcers to the chemical influence of our common stimulating applications. We should commence by an instrument calculated to produce the

---

sures recommended to subdue the irritation, his stream had been on some occasions as large as natural, I recollected that he had not complained of involuntary emissions. On making an inquiry as to this point, he said that he was very frequently troubled with their occurrence. Examination detected a highly sensitive prostatic urethra, but no stricture.

* Howship on the Urinary Organs.

least irritation, and increase this in proportion to the diminishing susceptibility of the urethra. No instrument should be introduced until those measures have been employed which should precede the introduction of instruments generally, for which I refer the reader to the treatment of stricture. When we have employed those for a few days or a week, a well-made highly polished elastic gum instrument, enclosing a fine wire, should be introduced, and repeated at intervals, longer or shorter in proportion to the improving state of the urethra. In general, once a-week will be sufficiently often, except towards the conclusion, when it may be done twice during that period with advantage; and as metallic instruments generally produce more irritation than those of elastic gum, they may at the same time be substituted for those of the latter description. As a small instrument is difficult to introduce, produces more irritation, and gives us no information of the real condition of the canal, should there be stricture, their use is to be avoided; yet it is not advisable in this case to employ one of the full size, because it will produce too much irritation for our present purpose, the canal not being capable in this condition of submitting to the natural distention of its sides, which, if it be forced, will be productive of an increase rather than a diminution of irritation. I generally commence with No. 10, increasing its size at every subsequent introduction. In some cases (notwithstanding the employment of measures recommended previously) we cannot introduce an instrument on the first trial, by reason of the excessive irritation it produces; but we always succeed on the second or third attempt, for although the bougie may have only passed through a portion of the canal, its presence there will in a degree relieve the irritability of the whole. On the first and second visit, the instrument should only be allowed to remain in the canal for a few seconds; its residence there being gradually prolonged, so that at last it may be allowed to remain a few minutes with advantage. Rest will very much facilitate the favourable progress of these cases. I have, in general, however, had patients whose avocations denied them this advantage; I never, however, neglect enjoining it where circumstances admit of their compliance. If motion should be found prohibitory of improvement, the bougie may be introduced the last thing at night, when the individual will often be enabled to resume his ordinary avocations in the morning with impunity. Throughout the whole treatment, those measures which are either directly or indirectly calculated to relieve irritation in the parts concerned, should be rigorously enforced, and which will be mentioned in connexion with the treatment of stricture."

On the subject of "the introduction of instruments in general," Mr. Macilwain has displayed a great deal of practical knowledge. He prefers the cylindrical form of the bougie "since if it be conical and its passage be obstructed, we are

at a loss to know if the obstacle impede the point, or whether this may not have passed a stricture which is not capable of admitting its increasing diameter." We hardly consider this, however, as a sufficient reason for the preference he thus so decidedly expresses—inasmuch as we have often succeeded in introducing a conically pointed bougie after having been baffled in attempting to introduce a cylindrical one. Nor are we disposed to agree with him in the opinion that "an elastic gum bougie should never be employed without a wire in its centre," for the presence of a stilet within a catheter has often appeared, in our hands, to impede the passage of the instrument through the urethra, instead of facilitating it. In metallic instruments it is desirable that the curve should correspond to that of the urethra. Our author thinks that the curves recommended by Sabatier and Dessault are much too large: he prefers the form adopted by Mr. Stanley, which is altogether straight, except within about two inches of its point, where it is gently, or gradually bent. The largest instrument which the size of the stricture will admit, is generally introduced with the greatest ease. He believes that practitioners have often contended with imaginary strictures from using small instruments. One gentleman had often been sounded with small bougies, which could never be made to pass far up the urethra, or to relieve the symptoms of stricture. Our author, however, immediately introduced a full sized bougie on the first trial, and ascertained that a mere irritability of the urethra had produced all the symptoms of stricture.

He does not approve of the use of dilators of any kind for the cure of strictures, and the following extract will no doubt serve to justify his opinion in the minds of our readers:

"It is not consonant with reason to suppose, that we can stretch living parts as we can inanimate substances, possessing an elastic property; yet we must think after this manner if we have recourse to the dilators; although, as before observed, I have not been in the habit of using them, I have frequently seen the disadvantage of increasing the size of the instru-

ment too rapidly. They never can be of any use except where the stricture is capable of admitting an instrument, however small; and, in such a case, the restoration of the canal can be effected by other means which enable us to regulate the progress of the dilatation with mathematical accuracy. I would beg also to observe, that doubts may justly be entertained whether, by the latter plan, the stricture is removed by dilatation, strictly so called. Many canals of the body certainly, in their healthy condition, admit of this dilatation, and so may the urethra when strictured, provided the alteration in structure be inconsiderable, since the natural texture of the lining membrane does not seem prohibitory of it. But where those changes have occurred, which uniformly attend cases of any considerable duration and severity, it is more probable that the pressure of the instrument produces absorption, either ulcerative or otherwise, of the newly formed substance; I am, however, of opinion that the dilator is an instrument always unnecessary for the removal of stricture, and frequently improper. For the foregoing reasons a bougie or silver catheter is to be preferred, where it is the object to remove the contraction by dilatation; to which may be added another, viz. the facility with which, in most cases, this is effected.

"Some persons have, in severe cases where no instrument could be passed into the stricture, endeavoured to overcome the obstruction by thrusting a conical catheter, or other firm instrument, onwards; I dare not say through the stricture, for the probability is that it rarely takes the route intended by the surgeon. Indeed, this practice is fraught with so much danger as never to be admissible. There are many facts, showing the difficulty and mischief attending it, which should absolutely prohibit any prudent surgeon from venturing on its employment. Firstly, the most accurate knowledge of the anatomy of the parts will be insufficient to enable us to ascertain that we are employing force in the right direction. Secondly, it should be recollected, that a strictured portion of the canal is less yielding than any other part, and the instrument will certainly pass where it meets with the least resistance; and lastly, I would recommend those who are disposed to follow this practice, previously to inspect the different preparations in this town, showing the frightful deviations which have occurred in the passage of instruments from the route intended."

The following practical details will prove so useful to practitioners, that we insert his own words at full length.

"Metallic bougies are either flexible or unyielding; the former, I believe, are at present but seldom used; they are too little flexible to have any advantage over the elastic gum, and too much so to supply the place of a firmer instrument. The metals or combination of metals of which they are made, are different, but of all metallic instruments, the silver catheter, I think, has indisputable claims to our preference; it admits of an exceedingly fine

polish and uniformity of surface, which very much contribute to facility of introduction; its lightness enables us to judge with the greatest accuracy of the force which the obstacle opposes to its progress, as well as that which we may employ to overcome it: further, we are assured of its entrance into the bladder by the urine escaping through it. The cases in which the plan of dilatation forms part of the treatment, as well as those in which it appears especially applicable, will be described hereafter. The employment of caustic, and of the argenti nitras in particular, is an old remedy revived by Mr. Hunter; and since his time, Sir Everard Home has employed it very extensively. The numerous cases recorded by the latter gentleman, sufficiently prove its powers in removing strictures; but his work, written with a candour well worthy of imitation, contains ample evidence to show that its indiscriminate use is by no means unattended with danger. Hæmorrhages, retention of urine, and intermittent fever, particularly it seems in those who had resided in warm climates, were frequently consequent on its use. The effect of this caustic is to produce a slough which could not be in some cases confined to the stricture; otherwise we are at a loss to account for such profuse hæmorrhage as that which occasionally happened. From the very nature of caustic, it is difficult to confine its action; this we find on applying it to other parts of the body where we have an opportunity of witnessing its effects. The consequences above mentioned naturally induced practitioners to look for some other remedy; many altogether relinquished the employment of the argenti nitras; and its disuse probably became more extensive, in consequence of Mr. Whately's showing us how much more safely we might employ the kali purum; which, in the generality of cases, is equally effectual. However, there can be little doubt that, in relinquishing the argenti nitras altogether, many ran into the opposite extreme. We frequently expect more from a remedy than a cool consideration of its nature would warrant, and when disappointed we as hastily reject it altogether. Impressed as I am with the various occasional inconveniences attendent on the use of the argenti nitras, even in the most skilful hands; and believing, as I do, that in general the kali purum is an equally effectual, and certainly a safer application, I feel obliged to admit, that there are a few cases in which the use of the argenti nitras is to be preferred, and which will be described in their proper place."

This explanation of the modus operandi of caustic potass in the cure of strictures, is exceedingly judicious, as will be seen from the following extract:

"The kali purum was introduced as a remedy for stricture by Mr. Whately; it is certainly a most powerful caustic, yet, by reason of its composition, it can be applied in the manner recommended by him without any

fear of bad consequences. The security in its use arises from the minuteness of the portion employed, and from its being readily miscible with oily and mucilaginous matters. There has been a great deal of speculation concerning the precise mode in which this caustic acts. It is probable that it acts differently in different cases: Mr. Whately speaks of its producing an abrasion, but there is something unintelligible in this term when it is applied to the action of a chemical substance on living parts. The probability is, that it generally acts as a stimulus primarily, whatever may be its ultimate effect; and that, be the quantity ever so small, it occasionally produces a slough; if it be large, it will, of course, do so. Its usual effect in strictures is, however, very analogous to the effect of stimuli elsewhere. Irritable strictures are removed very quickly by kali purum, and in those which are not particularly so, may we not believe, that it stimulates them and produces absorption. It is an admitted principle, that newly-formed parts are incapable of sustaining vehement action; and if this reasoning upon determined facts apply to strictures, which in many instances may be so considered, it readily explains the mode of action by which the kali effects their removal. I have made some experiments with a view to ascertain its precise mode of action when applied to the urethra, but as they were not sufficiently conclusive, I shall not mention them further than remarking, that as far as any inference was warranted, it was decidedly in favour of the opinion that the kali acts as a stimulant."

We pass over his chapter "on the treatment of ordinary cases," in which he recommends the careful use of bougies, aided by appropriate constitutional remedies, and proceed to select some useful remarks "on those cases to which the *kali purum* is especially applicable. The treatment of many cases which are curable by the use of a bougie alone, may nevertheless be happily expedited by the addition of the potass.

"The case, however, in which the kali is so particularly serviceable, is easily known and described—easy of relief by this caustic, but exceedingly perplexing if otherwise treated. In the first place, I would observe, that in those individuals who have been presented to my observation, there has been some very obvious indication of a disordered state of the general health; although the extent of this, as well as its particular feature, has varied considerably. The usual symptoms of stricture are present, and, in general, severe; the peculiarly distinguishing character, however, is a most remarkable sensibility of the stricture. However gently you may pass an instrument —however soft, or, indeed, whatever be its composition, the moment it arrives at the narrowed portion of the canal, the patient complains of severe

pain; and, in those cases which I have seen, blood also invariably follows it when withdrawn. It is this latter circumstance which is calculated to lead the practitioner into error; mere irritability so commonly attends a stricture, and is so frequently relieved by the kali purum, that the excessive degree of it which characterises this case would not alone, in all probability, prevent a surgeon from at once applying this caustic. But a general impression, and so far not an erroneous one, prevails, that if a stricture bleeds, it is more prudent to delay the use of caustic, even where it is proposed eventually to employ it. I was much perplexed by these cases when I first met with them. I used various kinds of instruments; every measure that was calculated to relieve general or local irritation was strictly enjoined, and, as I had reason to believe, implicitly adhered to. Still, however, at the subsequent visit, the same failure in introducing any instrument occurred; and, notwithstanding the gentlest manipulations only were employed, the pain was still considerable, and blood (in some cases to the extent of several ounces) followed after the instrument was withdrawn. Thinking, however, that these were only extreme cases of irritable stricture, and that the ungovernable disposition to hæmorrhage was merely the result of the extraordinary sensibility, I applied the kali one morning to a stricture which was at the time bleeding pretty freely, although the blood did not, in fact, flow otherwise than *guttatim*. The pain during its application was very considerable; yet, as it was not more than that which had been endured from the contact of the unarmed instrument, no part of it was, I think, attributable to the kali. The relief which followed, even within the space of twenty-four hours, was very considerable. Every symptom became diminished in severity, and the painful sensibility completely subsided after two applications; the disposition to hæmorrhage also no longer existed. I have since repeated this practice in every case in which these circumstances were present at the commencement of the treatment, without any hesitation, and have never had reason to regret so doing; the same good effects have been invariably the result. In all cases, the whole of the plan calculated to relieve irritation, has been perseveringly adopted at the same time, therefore, I cannot say what would happen if the kali were trusted to alone; were the surgeon to neglect this part of the treatment, it would be a gratuitous relinquishment of measures well known to be beneficial; so that it is scarcely necessary for me to insist on the expediency of their adoption."

In the cases of stricture where the lunar caustic is useful, there is an extreme want of sensibility in the contracted portion; the rudest manipulations which are usually made, are attended with no pain; neither does any blood follow the introduction of instruments; the severity of the symptoms of stricture bears no proportion to the narrowing of the canal.

The most unpleasant symptom which he has observed is a straining, which is violent; but distressing rather than painful. The sensation imparted to the hand by a bougie, is, as if it was pressing something unusually hard. If the stricture be in the anterior part of the urethra, the latter is felt unusually hard on examining externally. In order to define the characters of this kind of stricture still more clearly, he observes, that it is the very reverse of that for which he recommends the kali purum.

For long strictures, and for cases where the whole length of the canal is contracted, he recommends the use of a silver catheter. He does not approve of the French practice of leaving the catheter in the urethra during any considerable period of time, although he confesses that it has occasionally been attended with great success in his hands. For our parts we must say that we can recommend this plan, from our own experience, as much better calculated to afford relief than the common method of leaving in the instrument but a few seconds, and frequently repeating its introduction.

Under the head of retention of urine, our author recommends to persevere in the soothing plan of treatment (laxatives, leeches to the perineum, anodyne suppositories and warm bathing) until the spasmodic irritation completely disappears. All attempts at introducing instruments before that period, will only serve to increase the irritation, and prolong the sufferings of the patient.

The remainder of the volume is occupied by three chapters —1st, On abscesses and fistulæ in perlneo,—2d, on removal of strictures by incision,—and, 3d, on stricture in the female, followed by the history of ten cases, illustrative of the principles laid down in the preceding chapters. As we have observed nothing of a very novel or interesting character under either of these heads, we will not extend this analysis by a further detail of the excellent practical observations of our author.

M.

ART. VIII.—*Observations on the Use of Colchicum Autumnale in the Treatment of Gout; and on the proper means of preventing the recurrence of that disorder.* By CHARLES SCUDAMORE, M. D. F. R. S. &c. &c. London. 8vo. pp. 116.

WE are pleased with this work, not only as it exhibits the true character of an active medicinal substance, which has for a long time enjoyed an undeserved reputation, but also because its general tenor is a strong and judicious reproof of empiricism generally.

There has never existed any disease, remarkable for the violence of its symptoms, or the degree of its fatality, which has not had its popular remedy. From the earliest ages to the present time, we read of incantations, charms, and material specifics for certain disorders of the human frame, and notwithstanding that the impotency of these have been frequently, we may say continually, exposed, every candidate for empirical fame, still finds a theatre for the practice of his impositions, in the credulity of men.

Gout is one of the diseases which has afforded a large field for the display of empirical ingenuity in the invention of nostrums. Leaving out of the question those remedies depending upon supernatural agency, which we sometimes hear of, we will confine our examination to the medicines which have been recommended by their unfortunate success in occasionally relieving the pain of a paroxysm of gout.

There are some forms of disease in which a neglect of the maxim, that the means of cure should always be directed to the cause, may not be immediately dangerous. But ample experience has convinced us that gout is not to be classed with these. We know that the excrutiating pain of gout may be alleviated in a short time, through the agency of a variety of medicines, but we also know that this relief is transient,—the disease still remains, and will continue to demonstrate itself in successive paroxysms, increasing in violence and in the

frequency of their occurrence. We therefore call the success of such palliatives as colchicum, an unfortunate success, inasmuch as it induces the unhappy subjects of gout to neglect the slow and certain means of eradicating their disease, while they depend upon a remedy which they think will *always* calm its violence, and ultimately terminate its existence. It is in this view only, that we deprecate the use of palliatives in gout. We do not wish to deprive a suffering patient of any means of relief from present pain, but we wish only to destroy that dependence on palliatives which will lead to the neglect of real remedies.

We have, it appears, assumed the fact as granted, that gout is not to be cured by those means which are usually resorted to for the purpose of temporary relie. In this position we are supported by almost all the respectable testimony on record.

This history of the disease, indeed, is sufficient to convince us of the fallacy of depending upon any sudden means for its removal. It is an evil of deep root and gradual maturation. It is the result of long continued improper habits of living, and frequently dependent upon hereditary predisposition. In either case it were folly to attempt its removal by any other means than those which effect a permanent change of the system generally, and this, we know, cannot be reasonably expected from the sudden influence of any specific stimulus.

Our author very properly observes, that "gout, even in its first visitation, is a compound disease, external in its appearance, internal in its cause. The paroxysm often takes the patient by surprise, and finds him in the enjoyment of health; or more correctly speaking, possessing comfortable feelings, and those good looks which give the portrait of health; although, most assuredly, the constitution is not in a healthy state."

"I am now giving a general description, and claim a licence against the exceptions to it, which occasional and individual example would furnish. In this general view, therefore, I

proceed to observe, that the kind of constitutional error which attends a first fit of gout, is an overcharged state of the vessels which belong to the abdominal viscera, and chiefly in the vessels connected with the liver; the secreting action of this important organ being also in some way altered from its usual state. The stomach itself is the organ least deviating from its ordinary and healthy state. The appetite very commonly continues natural, unless, indeed, the symptoms are sufficiently severe to produce high sympathetic fever, when thirst and loss of appetite would naturally follow. The stomach, it is true, has been the parent source of gout, in being the medium through which too much animal material has been introduced into the system; but it seldom suffers much inconvenience in the first instance.

"In the progress of time, if improper habits are continued, dyspepsia, or true indigestion, will be produced. Most commonly we find that the patient traces a gradual enlargement of the abdomen, joined with various indications of an increasing fullness of habit. The veins, especially of the extremities, are more distended with blood than is natural; and there is a want of due softness and pliancy in the right hypochondrium, where the principal part of the liver is situated. There is too much abdominal corpulence; the secretions are changed from their natural state; the intestinal evacuations are darker than usual, they have a morbid degree of fœtor, and lead us to the conclusion that the bile has acquired an irritating and acrimonious quality. I infer, under such circumstances, that the liver, receiving an excessive supply of blood from that important vessel called the vena portæ, is stimulated into increased action; and not only is a larger quantity of bile formed, but it is also more exciting in its quality. That the process of assimilation on the conversion of chyle into blood is disturbed from the healthy course, is most commonly proved by the condition of the urine, which has a higher specific gravity than usual, is strongly animalized, and deposits dense sediments."

This picture of the disease readily points out its remedy. There is extensive organic derangement, and consequent interruption of function upon which the more prominent, or, as our author expresses it, the external symptoms of gout depend. These derangements have been gradually effected; they must, consequently, be gradually corrected. On this subject, however, we will have occasion to speak hereafter; we postpone it, at present, to confine our remarks to the use of colchicum.

Dr. Scudamore mentions the *eau medicinale* as a remedy for gout, whose introduction formed an era in the treatment of that disease. That this preparation did, in very many instances, succeed in removing paroxysms of gout, is not denied; indeed, its prompt agency in removing present symptoms, was such as to insure it very extensive popularity. "In its first trials," says our author, "in the majority of instances the patient seemed to obtain a cure as from a charm; so speedy and magical was its influence. But the fallacy of the apparent cure always appeared sooner or later; and the frequent failure of the remedy to produce even temporary relief, with the very serious and even irreparable injury often inflicted on the constitution, in the course of a few years, brought the true character of the medicine to light. Meteor-like, its undeserved fame ere long declined, and has now wholly passed away."

The *colchicum autumnale* is now introduced as the successor of the *eau medicinale*. It may be proper to remark, *en passant*, that the colchicum is not a new remedy, but that it appears to have been used by Demetrius Pepagomenus, in the thirteenth century, and was known at that time by the name *hermodactyle*.

"From the comparative trials that I have made," says Dr. Scudamore, "of the powder of the root, the tincture and the acetic preparation, I soon became convinced of the remarkable mildness of the latter, and the preference due to it in that particular. By joining it with magnesia and a neutral salt.

such as the sulphate of magnesia, I found a combination inoffensive to the stomach, and remarkably certain in its operation on the bowels. I was at a very early period impressed with the conviction, that the most favourable use of the colchicum consisted in making a selection of this, the mildest preparation, and of employing it only in combination with other medicines of an aperient and corrective nature. It was my object to borrow, in a safe manner, from the power which this medicine might exert over the symptoms of the disorder, but not to regard it as a lasting agent of cure."

Our author proceeds to mention "Wilson's tincture" and "Reynolds' specific," both of which operate similarly to colchicum, and are, probably, preparations of that article. Of the first of these he observes, that Wilson's tincture operates in the same manner as the *eau medicinale*, but must be given in larger doses. It disagrees with the stomach, and produces giddiness and other unpleasant symptoms. "I have known the strongest persons rendered very nervous from its influence; sometimes in a fearful degree. In a few instances it has continued to give relief to the symptoms without any apparent abatement of its efficacy; but such favourable examples are rare, and I do not know any instance in which it has not weakened the nerves more or less."

Dr. S. relates two cases in illustration of the opinion which he entertains of the character of Wilson's tincture. They would no doubt be quite in point if we could attach any specific meaning to such phraseology as "*weakening the nerves*," which is mentioned as one of the evil effects of colchicum. There are so many symptoms of disorder referable to a variety of morbific causes, that are, in common parlance, attributed to "weakness of the nerves," that we hope our author will excuse us for this passing criticism on his language.

We do not copy the cases by whose history Dr. Scudamore illustrates the effect of Wilson's tincture, nor do we think it necessary to follow him in the specification of the slight

shades of difference that may be observed, by close attention, between this remedy, Reynolds' specific, and the acknowledged preparations of colchicum. The general result of his experience is, that the *eau medicinale* is the most effectual, of the various remedies above mentioned, in removing a paroxysm of gout, and that it acts in smaller doses than the other preparations—next to it follows "Wilson's tincture" in point of potency, in which particular it is a little superior to "Reynolds' specific:" and of the various preparations of colchicum, the proof spirit tincture is the most active, though the acetic preparation given with neutral salts is the most expedient. Finally, that no dependance can be placed upon any of these substances as remedies; on the contrary, that in some instances they have aggravated the disease, and finally, that all the advantage which can be derived from them is confined merely to the object of procuring transient relief from the anguish of a present paroxysm.

Having destroyed our hope in this quarter, our author has pointed us to a more rational source, whence to derive exemption from this attendant curse upon the indiscrete indulgence in the luxuries of life. We take great pleasure in following Dr. S. through this part of his subject, as we think that his observations are the result of true experience and sound medical reasoning, and are, therefore, calculated to be extensively beneficial. We would, indeed, be highly gratified in being in any degree the means of "holding the mirror up to nature," so as to show many who suffer in mind, body and estate, from this protean disease, the real source of their grievances, and the only method on which they can reasonably depend, for a happy deliverance out of their sufferings.

From the observations on the nature of gout, introduced at the commencement of this article, we are prepared to expect the recommendation of some other plan of cure than that which has for its object the sudden removal of pain and local inflammation.

According to the maxim, that the first step in the cure of a disease is the removal of its cause, in those cases of gout which result from indulgence in rich food and sedentary habits, the necessity of a change in these particulars is sufficiently evident.

Excess is always dangerous, and should therefore be avoided. It is a nice question to determine whether a sudden transition from the simple food and active life of the labourer, to the indolence and luxury of the epicure, would be more immediately pernicious, than the sudden change from high living to excessive abstemiousness. As evil consequences are to be apprehended from any sudden and excessive change of habits, we must allow this consideration to modify the practice which is indicated by the maxim above mentioned. The change, therefore, to be made in the habits of the patient, must be gradually effected, independently of the degree to which it must ultimately be carried "The experience and attentive observation of many years," says Dr. S., "have convinced me, that it is highly important that the cure of gout should be gradually conducted."

The treatment which our author recommends, consists chiefly in the use of aperient medicines, and the occasional use of calomel as an alterative. By these means, conjointly with a gradual relinquishment of unnecessary stimuli, those visceral congestions, upon which the disease mainly depends, are removed. These principles are illustrated by a case which we give in our author's words.

"A gentleman, considerably advanced in years, had been in the habit of taking the different strong medicines, the *eau medicinale*, Wilson's and Reynolds' medicines, and the wine of colchicum, in succession, accordingly as the fame or accidental recommendation of one remedy had superseded that of another. Instead of being attacked by regular fits of gout once or twice in the year, he was assailed by the disease every four, six, or eight weeks, which had brought upon the constitution every imaginable distress. I found the bowels in a most

unhealthy state, and although the appetite was in general sufficient, the digestive powers and the ulterior process of assimilation had become so impaired, that, to use the impressive language of the patient, all his good food seemed to turn only to the disease and to his discomfort.

"I commenced my plan of treatment solely by the use of correctives, and aperients, and regulated diet. When gouty action returned, I employed the *acetum colchici*, neutralized and in combination with aperients, with every advantage; but except during the prevalence of the irritation of gout, I did not use even this mild preparation. The limbs were sponged night and morning with a lotion of camphor mixture and alcohol, used at a tepid temperature.

"The second stage of treatment consisted in combining the use of tonic with alterative and aperient medicines; and as soon as the chronic inflammation and tenderness of the joints were removed, sponging with tepid salt water and moderate friction, and champooing were employed for the limbs.

"The concluding treatment comprehended the discontinu- of alterative medicine, the diminished use of aperients, occasional use of tonics, and continued attention to the limbs; for the treatment of which, a stimulating liniment was used. Change of air, horse and foot exercise, and all general aids to health and spirits, filled up the plan for restoration, with such success, that two years passed away without a return of gout; and in the third year, one paroxysm only occurred, which was short in duration, and yielded readily to my usual plan of treatment."

Other cases are related by our author, illustrative of the nature and proper method of cure of gout; but, as their history does not materially differ from that which we have just quoted, we do not think it necessary to enter into their details.

Dr. S. is not unwilling to take advantage of the occasional benefit to be derived from colchicum and other substances calculated to remove a paroxysm of gout. But the following

extract will show how little dependance he places in them, as exclusive remedies:

"The fundamental principle of my objection is, the impropriety and danger of arresting the symptoms of gout, by means of the strong agency of these specifics, without producing any useful and adequate influence on the cause of the disease.

"Let it be constantly kept in view, that all which appears externally, and to which the name of gout is given, is but the least part of the real disease; and that the cause exists in the system within. In its first occurrence, the gout is a much more simple disease than afterwards, and most commonly the result of a particular kind of repletion, belonging to the abdominal viscera. The patient has found himself growing corpulent, particularly in the abdomen, and has acquired a fullness of habit; the excretory functions have been inert; and these circumstances concurring with the peculiar disposition to this disease, a paroxysm takes place.

"In the course of years the nervous system yields more or less to the dominion of gout; and it will often happen, that a fit shall be produced *by high nervous irritation*, in consequence of mental or corporeal causes strongly affecting the nervous system. The strong passions of the mind, injury to the body from accidents, the disturbance produced by other diseases, have this influence.

"In general it happens that the predisposing condition of the constitution, which terminates in a fit of gout, has been gradually forming for a considerable period of time. A state of disordered function in the several abdominal viscera has been insidiously taking place, of which the patient has been wholly unconscious.

"Even as a matter of theory, it would appear quite unreasonable to attempt the cure of a disease thus slowly formed, although suddenly appearing, by means of the powerful agency of a single dose or a few repeated doses of any medicine; and it would also suggest itself as a probability that it

would be attended by injury to the constitution, to dismiss the symptoms so quickly, while the cure of the cause could not possibly be accomplished in so summary a manner."

"Some persons who have taken the alarm from a first visit of the gout, and who have had the resolution and prudence to adopt a considerable degree of forbearance in their habits of living, and care in their general regimen, have been successful in preventing a return of the complaint. These have been principally instances of acquired gout; but when the disposition is hereditary and very strongly existing, it must be admitted that every care will not entirely counteract the return of the disorder. Yet the value of such care is not to be the less esteemed, for it will serve most materially to mitigate and diminish evils which cannot be altogether prevented.

"The gout, then, is a disease prone to return more or less frequently, to increase in severity, and to effect a great number of parts, as the constitution becomes more subjected to its decided influence.

"Even in its simplest form, as exemplified in a first fit, I have already stated that it is connected with that species of repletion which belongs to the vessels of the abdominal viscera, and chiefly of the liver. But in its progress, it manifests this connexion much more strongly; and I do affirm that, in every long-established case of gout, the functions of the liver are more or less unhealthy; and, in a very large proportion of cases, the symptoms of gout are entirely supported by a great derangement of the biliary system, and by an unhealthy condition of the intestinal canal. This disorder of functions is rendered manifest by the appearance of the excretions."

As Dr. Scudamore is of opinion that in gout the liver is seriously affected, we are somewhat surprised to find in the division of his work devoted to the "use of mercury," the following opinion: "I consider it an axiom of importance, that mercurial medicine should never be administered to gouty persons, to any extent which carries with it the risk of producing mercurial fever." We cannot see why the mercurial

action should be dreaded in this disease, more than in other circumstances attending a disordered liver, where we depend almost entirely upon the specific action of mercury.

Our author, however, has some faith in calomel, employed for other purposes than the production of mercurial *fever*.

" When the alvine excretions are morbidly dark and fœtid, and the urine deposits a lateritious sediment, I give the preference," he says, " to a moderate dose of calomel, combined with about a grain* of James' powder, some compound extract of colocynth, and three or four grains of extract of poppy, to be administered at bed time, directing a suitable aperient to be taken in the morning, before rising.

" This method being continued, with occasional intermissions, till the appearances afford the evidence that vitiated secretions are effectually removed, it will be expedient to use the more alterative form of mercury, as, for example, the pilula hydrargyri, the hydrargyri oxydum cinerum, or the pilula hydrarg. submur. comp. in combination with the compound extract of colocynth, or the extract of rheubarb; giving, regularly, a gentle aperient in the morning, of a nature not calculated to weaken the stomach, or produce nausea. Half a grain or a grain of ipecacuanha, or a grain or two of castile soap, may, on some occasions, form an useful addition. I prefer the ipecacuanha, if desiring to increase the secretion into the bowels,—the powder of squill, if wishing to act on the kidneys,—and James' powder, for the purpose of promoting a more free action of the skin.

" When the biliary functions are completely restored to health, the mercurial alteratives should either be laid aside, or used only occasionally; but when the action of the liver or the intestinal canal is permanently in error, the value of

---

* We confess that we cannot calculate the effect of one grain of James' powder, from any data, that we possess, respecting the actio of this compound.

mild doses of mercurial medicine, in conjunction with aperients, is, in my mind, unquestionable. The alterative administered at bed time, and the aperient before rising in the morning, afford real benefit and sensible relief. In this manner also an increased action of the bowels may be maintained for a long time without producing debility; because the morning medicine does not rob the patient of nutriment, while it insures the removal of vitiated accumulation from the bowels.

"I am solicitous to draw the just line of distinction between the use and the abuse of mercury. If employed with judgment and caution, it is the most valuable remedy in the materia medica, for effecting the desired change of action in the different secreting organs, connected with digestion: and I confess my regret, that any respectable author in medicine should level accusations against almost any use of mercury, which can only, with the smallest propriety, be offered against its abuse.

"In gouty persons, and those who are not liable to gout, we meet with examples of constitutional indisposition, so obscurely marked, that, unless we investigate the nature of the excretions from the alimentary canal, in a very regular manner, we will fail to obtain any knowledge of the nature of the case, or its proper treatment."

Our author here makes an allusion to a form of disease, not, we believe, very common in its occurrence, but of very obscure and difficult diagnosis. It is stricture of the rectum, sometimes spasmodic, in other instances permanent. It is marked by irregularity of the bowels, particularly costiveness. Active cathartics at one time fail to produce their proper effects: again, the bowels becomes very irritable, and the most unpleasant feelings harass the patient. The treatment which is recommended, is the use of the bougie.

Our author has not neglected a very important consideration in the treatment of gouty patients, namely, attention to diet. We perfectly agree with him in the opinion, that "a strict attention to suitable regimen, in all its particulars, is so

important, that, if neglected, neither physician nor patient can obtain success."

This is so important a consideration, and so judiciously urged by our author, that we cannot refrain from extending the present article to a few observations in relation to it. We believe, indeed, that the progress of disease, generally, would be diminished in a much greater degree by proper attention to diet and prophylactic habit, than by any dependance upon counter-agents to morbid action already formed.

"Although it happens occasionally that the utmost care and prudence prove insufficient to prevent the first visitation of the gout, or its returns, yet it is still more familiar to our observation, in how great a degree the disease is the offspring of indulgence and irregularity in the habits of living.

"Selection in the articles of diet, and moderation in quantity, must be the peculiar care of the gouty patient, if he desire to counteract the returns of the disorder. As regards the quality, he must be mindful to avoid those materials which most tend to cause acetous fermentation; also, on the other hand, those which are too nutritious. A dinner of turtle might be digested with perfect comfort, but it would be a deviation from the proper principle of diet, as tending to the formation of too much blood.

"Until the constitution has become weakened, it usually happens that the stomach of a gouty patient is very competent to its office, and that the appetite is regularly active rather than deficient. In fact, it is a very common case, that too much food is taken in the stomach, to admit of the subsequent process of digestion being perfectly performed; or, supposing that every stage of the digestive action is completed in a healthy manner, and that all the chyle is assimilated into good blood, a plethora gradually takes place, which introduces a fit of gout.

"Indigestion in the stomach is readily distinguished by the patient, in the notable symptoms of heart-burn, flatus, a sense of weight, or soreness, after a full meal: but the consideration

of diet, as respects the plethoric state of the constitution, belongs to the exercise of judgment and reflection, rather than to sensation.

"Common prudence and immediate comfort, would dictate to every one, the necessity of avoiding any kind of food which experience has proved to be unsuitable. In principle, also, many articles of food should be avoided by the gouty patient, and, as being unfavourable to immediate digestion, I may mention,—salmon and stewed fish; pork food, unless care be taken to avoid the skin and fat; all meat which is not tender, but especially hard salted meats; pickles, unless occasionally and sparingly, and when they are well seasoned; salads, except now and then, and when the stomach is in the best state; for, besides that, these latter articles are not convenient to a stomach liable to become disordered, they quicken the appetite too much for meat. Rich pastry, and most confectionary should be avoided; although a plain pudding, with any kind of good fruit, or the preparations of Semolina, rice, or bread, and stewed fruit, are as proper for a gouty individual as any other.

"Most persons commit still greater error in the quantity, than in the quality of their food; and, as respects the production of gout, it is eventually even more important. A fit of indigestion will often cure itself: but the gradual repletion of vessels which ensues from a full system of diet, with certainty leads to a continued disease. Hence it is of consequence to avoid heavy, rich soups; and as a general rule, I would advise the restriction to plain well-made gravy-soup, and that sparingly.

"Simplicity of diet consists greatly in choosing what is most proper, and confining the meal to such judicious choice, instead of partaking of a great variety of dishes; but the temptations of a well spread table, demand the exercise of greater prudence than is usually practiced."

In proportion as care and moderation in diet are observed, together with a due share of regular exercise, the use of medi-

cines is less required. Important to health as the regulation of the bowels is for all persons, it more particularly concerns the gouty patient. The natural action of the bowels, however regular, does not appear sufficient to prevent the accumulation of morbid secretions; which, after a time, seem to concur with other circumstances in giving rise to a fit of the gout. Experience is in favour of this supposition: we find that the frequent use of aperients tends materially to prevent the recurrence of gout.

"I would lay it down, as a general rule," says our author, "that every gouty person, however regular the state of his bowels may be, should take some aperient, at least once a week, throughout the year, and if he be corpulent and of full habit, twice a week; and farther, that in every instance it is important that the bowels act once a day, as a constant rule; and those who are corpulent, or much prone to gout (unless debilitated) should study to produce the habit of action night and morning."

In the close of his work our author expresses his conviction that there is no disease more perfectly within the power of medicine than gout. The plan of treatment of which we have given a sketch, is certainly founded in a correct knowledge of the pathology of this disease; and the slight variations which may be demanded by peculiar circumstances will be easily suggested to the intelligent practitioner, who attends to the principles which we have attempted to display.

T. M. H.

ART. IX.—*Report of the Transactions of the Academy of Natural Sciences of Philadelphia, during the year* 1824. Submitted by the Recording Secretary in pursuance of a Resolution of the Academy. Dec. 1824.*

INDEPENDENTLY of the real utility which may arise from the cultivation of natural history, with regard to our wealth and comfort, the peaceful walks of the naturalist invite us, by innumerable attractions, to indulge our more amiable feelings and forget the scenes of "noisy folly and discordant vice," which continually beset us in our commercial and political connexions.

From those turbulent occupations in which the jarring interests of men exhibit so many pictures of disgusting selfishness and unruly passions, we turn with delight to the contemplation of the works of nature, whose infinite variety affords an endless succession of novelty. And while we admire the splendor of some of her works, and the inimitable beauty of others, and the harmonious order which reigns throughout all, we cannot but adore the wisdom, and tremble at the power which gave existence to the earth, and stored the ocean and the land with innumerable animated beings, and not less wonderful inanimate objects, all conspiring to the support, to the instruction, and to the happiness of intellectual man.

As a celebrated philosopher observed, "the undevout astronomer is mad," so with equal propriety may we pity the ignorance and insensibility of those who ascribe the labours of the botanist to "puerile enthusiasm" and who see, in the magnificent science of geology, nothing but the "useless art of giving names to stones."—But civilized society is daily enjoying the advantages, both intellectual and commercial, which have arisen and continue to flow from the cultivation

---

* We are indebted to the politeness of the editor of the Port Folio, for whom this article was prepared, for the privilege of inserting it in this journal. ED.

of the natural sciences: and while the older and more polished nations of Europe are vieing with each other in the enjoyment of well-earned honours, for their proficiency in these pursuits, it is gratifying to see in our young nation a spirit of emulation and enterprising zeal in the pursuit of knowledge, and for the promotion of general good.

The institution, a report of whose transactions is at present before us, although of recent date, has acquired a respectable and highly interesting character. It has been the means of developing much native talent, and making many additions to our knowledge in the various branches of natural science; some of which, especially in the department of minerology, may become very important to our commerce and manufactures. The investigations of the zoologists and botanists of the academy, have enriched these provinces by the introduction of many new genera, species and varieties, the products of our extensive region, and they have also corrected many errors of older professors in the classification and nomenclature of natural objects.

In the department of zoology, the well known names of Lesueur and Say, appear as contributors to the academy, during the last year. We copy, *en passant*, a judicious remark of the former gentleman, respecting nomenclature. "I have adopted for this species (cephaiopterus *vampyrus*) the name of the celebrated Giorna, well known in science, and reject such names as Devil, Vampyre, &c. which may be associated together as names calculated to repel those who are disposed to admire the beauties of nature, and who have an inclination to cultivate scientific and natural history. How far preferable is the custom of applying the names of those naturalists who have enriched science with their discoveries, or new and valuable observations, to that which introduces into our pages those chimeras which exist only in a morbid and timorous imagination!"

We may take this occasion to remark, that too little attention is paid to nomenclature, in most of the natural sciences.

In the infancy of a science, the want of a correct nomenclature, founded upon immutable principles, is not much felt; but when the objects of study become multiplied, both in number and in diversity of character, a distinct classification becomes absolutely necessary to the acquisition of a knowledge of them.—Zoology, botany, chemistry and mineralogy, present us with numerous examples of a plurality of names applied to one object, which unphilosophical practice occasions great perplexity and discouragement to the student. Botany is peculiarly liable to this unhappy obstacle to her advancement, by reason of the variety of sources from which the name of a plant may be suggested—namely, peculiarity in the figure of the flower, the leaf or the stem, its habits, the country in which it is found, and the name of its discoverer. The other sciences are confined within more reasonable bounds. Chemistry, particularly, enjoys a great advantage over all the others, in the possession of a nomenclature, which not only prohibits the slightest departure from established rules, but also recognises in its specific appellations the nature and constitution of its subjects. But to return to our more immediate subject.—Mr. Say has made many interesting additions to the entomological collection of the Academy of Natural Sciences. In exploring our continent, between the valley of the Mississippi and the Rocky Mountains, this gentleman was enabled to collect a large number of insects before unknown to entomologists. Among his contributions to the academy, for the year 1824, it is observed in the "Report, &c." that he has added no less than forty new species to the order hemiptera.

The Recording Secretary's Report, takes notice, also, of other contributions from this gentleman, whom we have named, and from Drs. Harlan, Troost, Pœppig, Mr. Bonaparte, and others.

As it is foreign to our purpose, and incompatible with our limits, to give a detail of the subjects of the various communications mentioned in the "Report," we refer those who

are interested in these matters, to the journal of the transactions of the academy, several volumes of which have been published.

We take this occasion to invite the attention of gentlemen who reside in the country, to the objects of this society. Our country has already yielded many interesting and useful additions to every department of natural history, and there is no doubt that it yet contains a variety of objects, a knowledge of which is very desirable. Instances frequently occur, of interesting additions being made to our catalogue of minerals and organic remains, from the collections of gentlemen, who, although not versed in science, have been stimulated either by a taste for natural history, or a very laudable curiosity, to preserve such specimens as appear to them to be uncommon. It is particularly desirable that fossils and organic remains, wherever dicovered, should be preserved, with an accurate description of the local situation in which they may be found. Many of the objects of natural history have become known only by the discovery of their skeletons; their race having become extinct; and some of these, for example, the mastodon, or mammoth, are highly interesting.

T. M. H.

ART. X.—*An Essay on the Symptoms and History of Diseases; considered chiefly in their relation to Diagnosis.* By MARSHALL HALL, M. D. F. R. S. E. and formerly senior president of the Royal Medical Society of Edinburgh. Octavo, pp. 130. London. 1822.

THAT a knowledge of the nature and particular signification of symptoms is of the utmost importance to the successful practice of medicine, is too obvious to require any argument. He who is deficient in symptomatology, will always grope in the dark, and prescribe under disadvantages which no other information can supply. As a distinct and particular department of study, however, semeiology is unaccountably neglected in the English and American universities. On

the continent of Europe, works on this subject are numerous; and in most of the medical schools of France and Germany, particular professorships are allotted to it. Until the present work of Dr. Hall appeared, there existed none in general circulation in the English language, to which the mere English reader could refer. The medical public are therefore under peculiar obligations to Dr. H. for this volume, and the more so as he has treated the subject in a very clear and edifying manner.

Chap. I. *Countenance.*—The expression of the countenance—or, as it has sometimes been called, the physiognomy of disease, when carefully studied and well understood, will often aid the practitioner very materially in forming a correct opinion concerning the nature and tendency of diseases. Independently of the changes of colour which occur in the skin, from deranged functions of the digestive and biliary organs, or from the peculiar condition of the capillary circulation, local congestions, &c. there is, in almost every form of disease, a peculiar expression of countenance, which serves as an important index to the experienced practitioner.

"Among the particular features, it is of moment to observe the eye, the prolabia, the brow, the nostrils, the lips, &c. The eye, in particular, affords the opportunity of judging of the degree in which the serum is loaded with bile in cases of icterus, and of distinguishing that disease from those morbid affections in which the complexion becomes sallow and icterode, from the state of the cutis and cutaneous circulation. The state of the prolabia affords an index of other states of the blood—as of a too serous condition, or of a defective arterialization. The nostrils, carefully observed, denote the condition of the respiration."

The author next points out those appearances which the face presents in particular affections. In *common acute fever*, he observes, the countenance exhibits a diffused flush, attended often with a turgidity, particularly in young and plethoric subjects. The tunica albuginea is generally suffused, there

is tremor of the lips in speaking, and the nostrils move rapidly in respiration. "In *acute symptomatic fever*, the countenance has a very different aspect, which it is important to observe, especially in a diagnostic point of view." There is, in this form of fever, no turgidity and flushing of the face; no suffusion of the eyes; no tremor of the lips, and hurried movement of the nostrils in respiration; and whilst these symptoms are absent, the surface is frequently affected with perspiration.

"In chronic symptomatic fever, the appearances are peculiar. There is a characteristic expression of disease which strikes the common observer, and, still more, the experienced physician; the surface and complexion are cool and pale, or affected with transient or partial heat and flushing, usually without sallowness, frequently with slight lividity, sometimes with cool moisture; there are emaciation and shrinking, the cheeks falling in, the action of the muscles becoming apparent, and the skin forming into greater or smaller folds. These appearances of the countenance are, however, greatly modified by the nature and seat of the original disease, as will be particularly noticed hereafter."

In disorders of the digestive organs, particularly when severe, there is always a paleness and sallowness of the face, with a dark hue about the eye; "the cutaneous vessels exude a little oily perspiration; the prolabia are slightly pale and livid; the muscles of the face, and especially of the chin and lips, are affected with a degree of tremor, particularly on hurry or surprise, or on speaking." This character of the complexion, &c., usually attends dyspepsia.

The icteroid appearance of the countenance in chlorosis, observes Dr. Hall, should not be confounded with *icterus* itself.

"The term *icterus* is merely expressive of a *symptom* of disease, although it is daily named, and has long been arranged as a distinct *disease*. The shade varies from yellow to green, or blackish. But the most important and only *practical* dis-

tinction, with regard to icterus, is that of its *causes*, or of the *primary disease;* the principal of these are:—1. Constipation, or loaded bowels:—2. Acute disorder of the digestive functions:—3. Disease of the liver:—4. Gall stones:—5. Hydatids in the gall ducts:—6. Organic tumours in the abdomen, situated near the biliary ducts:—7. The pregnant uterus:—8. Disease of the right kidney:—9. Or even of the right lung or cavity of the pleura."

We shall not stop to notice our author's observations on the expression of the countenance in apoplexy; but the remarks contained in the following quotation are particularly worthy of attention:

"In inflammation of the chest with acute pain, or pleuritis, the degree of the pain is marked by a proportionate contraction of the features in general, and by acuteness and elevation of the alæ nasi; the nostrils are moved and dilated by the alternate acts of respiration; there is sometimes a degree of vivid flushing, terminating abruptly, and bounded by whiteness towards the nose; the heat is inconsiderable, and there is frequently perspiration.

"*In inflammation of the chest, with dull pain or pneumonia,* there is less constriction of the features, but there is an appearance of anxiety, and the nostrils are widely dilated before each inspiration; there is a little heat, but frequently a degree of perspiration.

"*In inflammation of the chest with great dispnœa*, and in cases of effusion into the lungs, there is usually a general and deep suffusion of the countenance, sometimes amounting to great lividity, and conjoined with turgidity; there is great anxiety, the nostrils are widely dilated on inspiration, and drawn in above the lobes; during inspiration, too, the pomum adami, and even the chin, are sometimes drawn downwards; the surface is cool and sometimes damp.

"The dawn of *phthisis pulmonalis* is marked by a delicate paleness, alternated with transient gentle flushing, slight lividity of the prolabia on exposure to cold, an appearance of

indisposition, frequently motion of the nostrils from the respiration, and frequently a quivering of the chin and lips in speaking. Its progress is denoted chiefly by gradual emaciation, in addition to an aggravated state of the other morbid appearances just mentioned.

"In hæmoptysis there is usually a florid state of the complexion, and frequently the effects of dyspnœa are observed in an acuteness and movement of the nostrils. If the hæmorrhage has been very great, there may be paleness, lividity, coldness, and a clammy perspiration, with great anxiety."

"In *inflammation of the abdomen with severe pain*, there is a continued state of the contraction of the muscles of the face, inducing an unnatural acuteness of the features; the forehead is wrinkled, and the brows knit—the nostrils are acute, drawn upwards, and moved by the alternate and irregular acts of respiration,—the wrinkles which pass from the nostrils obliquely downwards, are deeply marked,—the upper lip is drawn upwards, and the under one perhaps downwards, exposing the teeth,—the chin is often marked with dimples. This state of the features is aggravated on any increase of pain—from change of position by muscular effort, or from external pressure. Indeed, in cases of abdominal affection, it is better to press on the abdomen, or beg the patient to raise the head and shoulders, and *watch* the *effect* on the expression of the countenance whilst the patients' mind is occupied with some other subject than to ask the direct question whether pressure induces pain—as is usually done; for patients naturally suppose that every painful part must be also tender, and are therefore apt to answer in the affirmative, although incorrectly."

Chap. II. *Attitude.*—By attitude Dr. Hall means, "*the posture and motions of the body, the state of muscular debility, power, contraction, and motion, some particular actions, and the general manner of the patient.*" According to the observations of our author, *tremulous motions*, and a *supine posture*, distinguish acute idiopathic from symp-

tomatic fevers in their early stages. Retention of the urine, in febrile diseases, may be suspected when the patient is constantly keeping his knees in an elevated position. The author's observations on the positions usually assumed in asthma, painful abdominal inflammation, colic, gangrene, strangulated hernia, and nephritis, are precise, and deserve to be attentively studied. In *organic diseases*, the patient soon becomes affected with permanent debility; he stoops in walking, and moves with slowness and caution. "Deep-seated pain or uneasiness is often produced by the succussion induced by *sitting down*, or making a false step in walking. In the appearance of the hand it is often easy to read a state of pain, anxiety, or other suffering,—it is closed or expanded, or variously moved."

"There is another symptom," observes Dr. H., of importance to be noticed, viz. "the state of *jactitation* and inquietude; it occurs in different states of the system, and in some diseases, but principally in cases of *irritation*, *exhaustion*, and *sinking*, and in *diseases of the heart*."

"General convulsion," says Dr. H., "is more particularly observed in diseases situated about the *base* of the brain."

Tongue.—This organ is variously affected in diseases. It becomes swollen, indented, fissured, and lobulated, and its surface covered with whiteness, fur, blackness, dry brown crust, chaps, &c. In some cases its papillæ are preternaturally prominent and enlarged; and in others almost entirely obliterated, giving its surface a smooth shining appearance. Sometimes it is protruded with great difficulty, owing to paralysis, dryness, and tremor; and occasionally also we find the patient incapable of retracting it, particularly where there is great insensibility. Dr. H. very correctly remarks, that the appearances of the tongue afford the best diagnostics of the various forms of idiopathic fevers, and of idiopathic from symptomatic fevers.

The following is an excellent description of the various appearances which the tongue assumes in dyspepsia, from its simple to its most aggravated form:

" The most ordinary effect of an occasional or accidental derangement of the stomach and bowels, is a loaded state of the tongue, the superior surface of this organ becoming covered with a layer of whitish, soft, mucous substance, admitting of being partially removed by the tongue-scraper; the whole internal mouth is, at the same time, more or less disagreeable and clammy, the taste depraved, and the breath offensive; and frequently the substance of the tongue is a little swollen, œdematous, and marked by its pressure against the contiguous teeth. In *acute dyspepsia*, the state of the tongue, already described, is observed with some modifications:—the tongue is in general loaded, the mouth clammy, the taste bitter or nauseous, the breath fetid, whilst the surface of the face is frequently oily; in some severe cases, the *load* has been very thick, and has eventually peeled off, leaving the tongue red, smooth, and tender; the *substance* of the tongue is generally swollen, œdematous, and impressed by the contiguous teeth: the *gums* are often red, tumid, and somewhat separated from the teeth by tartar, and are easily made to bleed; the inside of the *cheeks*, also, frequently partakes of the œdema, and receives, like the tongue, impressions from the adjacent teeth; sometimes the cheeks and the gums of the posterior part of the mouth have been so swollen as to protrude a little over the teeth, and are either *ulcerated* by the pressure, or *wounded* by being bitten—circumstances which are apt to be induced or aggravated by cold. Through the load on the tongue the red papillæ are frequently seen either over its whole surface, or at its point principally; frequently the tongue is not only *indented*, but formed into *creases* or folds; sometimes deeper and more numerous sulci are formed, the edges of which are sharp and the sides in contact, and requiring to be separated by the two fingers, or by protruding the tongue further; in some cases the tongue is

less loaded and indented, and its edges are red and even. In cases of acute dyspepsia, I have seen the tongue affected with deep, foul ulcers, resulting from the slow suppuration of a hardness about the size of a horse-bean or nut, situated just under the surface of the tongue, which is loaded, swollen, and foul, with a copious saliva and a fetid breath. In very *protracted* cases of chronic dyspepsia the tongue assumes several remarkable modifications of form and surface:—in the *first* case, there is a universal enlargement of the papillæ over the surface, which is now generally clean; in two instances the papillæ at the *most posterior* part of the tongue became particularly enlarged, causing pain on swallowing, and some alarm to the patients; in the *second* modification, the surface of the tongue is formed into lobules, sometimes deeply intersected, and resembling in form those of the base of the cerebellum; at other times, of less regular form; and lastly, assuming the form of squares; in the *third* variety, the tongue acquires an absolute and morbid smoothness of surface, which appears as if glazed, and is tense and unyielding. In all these cases the tongue is morbidly clean, the mouth, taste, and breath, being nearly natural, and its colour, although perhaps rather paler, frequently little changed."

The appearance of the tongue in chlorosis is quite characteristic of this disease; in the commencement of the disease, the tongue is pallid, somewhat tumid, slightly loaded, indented, and furrowed; the gums and prolabia also are pallid, and the breath is foul. As the disease advances, the tongue becomes more and more deprived of blood, and acquires a peculiar semi-transparent appearance, and a very pale lilac hue. The papillæ disappear, and the surface often becomes smooth and shining. The same pale hue is discovered in the gums, prolabia and inner surface of the cheeks. The breath acquires the odour of *new milk;* in the advanced stage of the disease, however, the mouth is less clammy and disagreeable than during its early periods.

Dr. H. observes, that there is, in this complaint, an affection of the prolabium and surrounding skin, which has not been noticed by authors. This is a peculiar dry-splitting and exfoliation of the cuticle of the parts surrounding the mouth, to the distance of about one-fourth of an inch.

Chap. IV. *General Surface.*—We shall pass over this chapter, as it does not contain any observations of particular interest or novelty.

Chap. V. *General System.*—Dr. Hall observes, that the principal sources of irritation are the presence of indigestible substances in the stomach, and of irritating matters acting on the mucous membrane of the intestinal canal. The effects of such irritants are either gradual or sudden. The *sudden* effects of intestinal irritation are: acute pain of the head, side, loins, iliac region, or of some other parts of the abdomen; vertigo, dyspnœa, palpitation, vomiting, hiccough; great anxiety and distress, clammy sweat, and sometimes excessive febrile reaction of the heart and arteries.

The effects of exhaustion, when attended with intestinal irritation, evince themselves particularly in the disordered functions of the brain, heart, thoracic and abdominal viscera, and the muscular system.

"The symptoms which affect the head are severe pain, beating and throbbing, rushing or cracking noises, vertigo, or turning round of the room, especially on raising the head or assuming the erect position, intolerance of light and of sound, wakefulness, palpitation, feeling of sinking, of impending dissolution, and being overcome by noise, disturbance, or even thinking, and delirium. The heart is, in different cases, affected with palpitation, fluttering, irregular and feeble action; there are beating and throbbing of the carotids, and sometimes even to the abdominal aorta, a frequent, bounding, and sometimes irregular *pulse*, faintishness, or fainting, urgent demand of the smelling-bottle, fresh air, fanning, bathing of the temples, feeling of impending dissolution, incapability of bearing the erect position, and some-

times early fainting from the use of the lancet. The *respiration* is affected in different cases, with panting, hurry, sighing, great heaving, gasping, blowing, moaning, catching, &c. and, as has been stated, with urgent demand for fresh air. There is, in some cases, an *irritative cough*, in violent fits—or in the form of continual hacking; this cough appears to originate in the larynx or trachea. The *stomach* is liable to become affected with irritability, sickness, retching, vomiting, hiccough, and eructation; the *bowels* with constipation or diarrhœa, pain, flatus, distention, &c. There are very frequently urgent restlessness, tossing about, and jactitation. In some cases, various *spasmodic* affections have occurred. We have often to combat the effects of exhaustion in the *puerperal state*, and in cases in which blood-letting has been improperly employed for diseases not inflammatory, or too lavishly in cases of inflammation."

Our author has noticed a great similarity between the symptoms of the erethismus mercurialis of Pearson, and the effects of exhaustion. Exhaustion or sinking manifests different appearances, according to the different circumstances under which it occurs. Sometimes sinking comes on as a gradual and simple weakness, decline and cessation of the circulatory and respiratory functions; at other times it occurs under the more prominent shape of great inquietude, jactitation, dispnœa, hiccough, &c. Sometimes it has the remarkable effect of dissolving the chain of morbid actions and sensations, constituting the disease under which the patient has laboured, and of presenting to his friends, and perhaps to his unwary physician, the appearance of amendment, when life is soon to terminate in an unexpected dissolution." Lastly, sinking supervenes speedily on the accession of gangrene. According to the observations of our author, there is an extraordinary similarity in the phenomena attending intestinal irritation, exhaustion from hæmorrhage, erethismus mercurialis, the deleterious effects of digitalis, sinking, and dissolution.

Chap. VII. *Respiration.*—In this chapter, the various morbid phenomena exhibited in disease by the respiratory organs are accurately and interestingly described. The following observations on the effects of perfect inspiration and expiration deserve particular attention:

"A deep inspiration is apt to induce cough, when the structure of the lungs is affected with inflammation or disease. But this morbid state is more distinctly ascertained by an attention to the effects of a *full expiration.* In many cases of morbid affection of the lungs, indeed, in which deep inspiration induces neither cough nor other inconvenience, a full expiration not only occasions cough, but other effects, which vary according to the *nature* of the pulmonary disease—in *inflammation of the bronchia* or of *the lungs*, in tuberculous phthisis, &c cough and rattling or crepitus are induced; these effects are also induced in some chronic affections of the lungs, arising either from slight but protracted inflammation, or from disorder of the digestive organs; in cases of *asthma*, too. in which the ordinary breathing, or even a deep inspiration, is unattended with any peculiarity, a full expiration excites both cough and the wheezing sound so characteristic of this affection. It is particularly useful to watch the efforts of a full expiration in the slighter affections of the pulmonary structure, and in the decline of pulmonary disease. Of these two modes of ascertaining disease of the lungs, I have long considered the deep expiration the most valuable, but the most neglected; I therefore strongly recommend it to the attention of the clinical student!"

We conclude this short analysis of Dr. Hall's book, with an earnest wish that this valuable work may soon be republished, and that it may obtain an extensive circulation among the members of the medical profession on this side the Atlantic.

ART. XI.—*An Exposition of the Principles of Pathology, and of the Treatment of Diseases.* By DANIEL PRING, M. D. &c. 8vo, pp. 510. London 1823.

THE subject of the present work is always an interesting one to physicians. The causes of disease, consequently their most appropriate remedies, are still desiderata in many instances. In the investigation of them, we are obliged to delve amidst a vast heap of the rubbish of hypothesis, and overturn the pretensions of many assertions which claim the respect due to established facts, while they are only the result of deceptive experiment.

Our author has reviewed the doctrines of several of the most eminent pathologists of former days; he has, however, neglected others who are at least worthy of consideration; among these we may mention Hoffman and Darwin.

Dr. P. very justly remarks, that "in the theoretical sciences it often happens that the career of improvement is marked by the substitution of a new error in the place of an old one." Cullen's doctrine of spasm, and nervous irritation in fever, is alluded to as an example of this kind. But we cannot see that our author has offered any other doctrine calculated to take the place of that which he wishes to overturn.

He observes that a sudden suppression of perspiration is generally considered as a cause of fever. He thinks, however, that the correctness of this doctrine may be doubted, when we consider the numerous instances in which the perspiration is suddenly checked without any ill consequence. Those men, for example, whose occupation exposes them to an atmosphere of high temperature, with frequent transitions to a cooler air, such as glass-blowers, bakers, &c. ought, according to Cullen's doctrine, to be continually liable to fever. But the force of habit, in these instances, overcomes the evil tendency of these exposures. On the other hand, who has not seen colds, rheumatism, pleurisy, and various forms of pyrexia consequent to sudden transition from a warmer to a

colder medium, when the body was covered with perspiration? The causes of disease, like other natural causes, are controlled by circumstances: and there are some constitutions which can bear with impunity those exposures which would be fatal to others.

In some instances there appears to be a constitutional predisposition, or hereditary tendency to a certain disease, which, under these circumstances, will require but a slight degree of an exciting cause for its development. We may mention, as examples, gout, rheumatism, hepatitis, and phthisis. There are others again, which being free from any morbid predisposition, preserve their balance against ruder assaults. But we have great faith, also, in the power of habit. The sailor who is continually exposed to heat and cold, to sunshine and rain, feels no inconvenience from an exposure which, under other circumstances, would fully illustrate the doctrine of Cullen.

Our author admits, that in case of suppressed perspiration, "the entrance of fluids into the extensive system of cutaneous vessels is resisted by a preternatural contraction of these vessels," it is then " obvious that those vessels which are not cutaneous, must contain more than their natural proportion of fluids; this state would be one of general internal plethora. But we observe that, as a consequence of suppressed perspiration, one organ always suffers principally; that there is a particular determination to one seat. If a contracted state of the cutaneous vessels could throw an unnatural proportion of fluids into the internal ones, so preternatural dilitation of the vessels of any other seat or system would deprive the cutaneous vessels of their natural proportion. We have then to choose whether disease is maintained by suppressed perspiration, or whether the suppression of perspiration is a consequence of disease."

This reasoning may be ingenious, but it assumes a latitude of probability, and a liberty of transposition of cause and effect, which, if generally adopted, would render all rea-

soning vain. We continue our quotation:—" If we consider here *merely the order of occurrence*, it would appear that the disease, say, for example, acute rheumatism, was produced by suppressed perspiration." Hence it appears, that the order of occurrence affords no certain ground of distinction between cause and effect! We fear that this will prove a very inefficient method of getting rid of the practice of " substituting a new error in the place of an old one," for the improvement of pathology.

With regard to the circumstance, that in consequence of suppressed perspiration one organ is found to suffer rather than others, our author observes, that " it is necessary to suppose a predisposition in such seat (or organ) which does not exist in others. This predisposition is nearly allied to disease; and the admission of it goes near to confessing that the circumstance of a suppressed perspiration was preceded by processes of disease in that seat which afterward exhibits its chief phenomena."

It is, indeed, very difficult, and in some instances impossible, to explain *ad demonstrationem*, why one particular organ should be the sole seat of a disease, the operation of whose cause is referred to general principles. But we think an organ may be peculiarly liable to a morbid impression, through mere debility, or from other causes entirely unconnected with the morbific agent. Dr. Pring must attack the fortress of Cullen by some heavier artillery, ere he effects a practicable breach.

With regard to the Brunonian system, our author has given the slain Percy another wound. In other words, he has laboured to demolish those parts of the system of Brown which have long since been thrown aside among the rubbish of forgotten things. He has, however, given this celebrated author credit for one judicious practical maxim, namely, the propriety of repleting very slowly after extensive depletion.

" In the beginning of convalescence," says Dr. Pring, " I have known a single meal, of a nutritious or stimulating quali-

ty, to which the system had long been unaccustomed, under the previous treatment of abstinence and depletion, followed by apoplexy, which was fatal in a few hours; and I have known the first stimulating meal taken, contrary to direction, twelve days after a delivery, which was attended by profuse flooding, followed immediately by accelerated pulse, pain in the head, eventually coma and death. In a similar case, a glass of porter, given injudiciously four days after delivery, has been immediately followed by apoplexy."

Our author does not approve of the practice, common in such cases, of drawing blood "copiously and frequently while the symptoms continue." He does not appear, however, to object to a moderate use of the lancet. His reliance is almost entirely on purgatives. "I have been in the habit of confiding in purgatives, to the almost total neglect of the lancet; but these purgatives have not been of a milk and water kind. If, after copious loss of blood, the pulse has suddenly *got up* from eighty to a hundred and thirty or forty in a minute, with intense pain in the head, perhaps slight incoherence of speech, restlessness &c., I have given six grains of calomel, and the same quantity of James' powder, followed by a two-ounce draught of salts and senna, with half a drachm of jalap in it. If this has been rejected, it has been repeated in less than an hour, and repeated as often as it was rejected, until it has produced copious evacuations from the bowels. One, and *perhaps** an important effect of such purgatives, is to make a great revolution in the whole intestinal canal, which is commonly followed by almost perfect relief of the head, and, *perhaps*,* an immediate subsidence of the pulse to a hundred, or a hundred and ten. The tendency to disorder of the head is afterward easily kept within safe bounds, by small but repeated doses of Epsom salts."

---

* Why does our author guard himself by the adverb *perhaps*, in these instances? It is the primary action of a cathartic to *make a revolution*, as our author expresses it, in the alimentary canal—and a reduction of the pulse is a natural and never failing consequence of active catharsis.

Dr. P. is of opinion that putting the system suddenly under the full influence of mercury, is the best method of subverting the disposition to cerebral disorder. But, whatever the Dr.'s experience may have been, we cannot consent to relinquish the lancet in cases of cerebral plethora or engorgement. Many cases occur, and perhaps they are the most numerous, in which the life of the patient depends upon instant depletion, and where it is impracticable to administer medicine by the mouth—even the delay of administering an *enema* would be dangerous, to say nothing of the inconveniences, and, often, impossibility, of using the œsophagus catheter. Again, cases of cerebral determination sometimes occur during convalescence from excessive mercurial impression;*—would Dr. P. recommend mercury in such cases?

On the subject of visceral congestion, our author expresses an opinion, which, by the way, if not involving a self-evident truth, at least reiterates a long established maxim. "I apprehend," he says, "it is generally, though not, perhaps, invariably true, that if visceral inflammation or congestion in fever can be kept within safe bounds, very little is to be feared from the constitutional state; and that the disease will, almost without an exception, run a safe, though a protracted course."

Our author's opinion, that stimuli are only useful in the advanced stages of typhus, is certainly correct, and it has been the rule of practice with all intelligent practitioners from time immemorial. We have witnessed the fatal effects arising from the exhibition of stimuli, in the earlier stages of typhus, by timid practitioners who feared the state of debility necessarily consequent, as they thought, to a free evacuation of the intestinal canal. We believe with Dr. Pring, that many cases of typhus gravior have been the result of improper prac-

---

* A case of this kind fell under our notice a few years ago. A young man, during convalescence from a bilious fever, for which he had been profusely salivated, suffered, almost daily, from a sense of weight in the head, temporary loss of memory, and disposition to sleep.

tice in the early stage of ordinary typhus, and might have been prevented by the timely use of the lancet and free catharsis. Dr. P. does not appear to have much faith in stimuli in any stage of typhus. The mercurial action is his chief dependance and last resort.

In extreme cases he recommends ten grains of calomel to be given every six or eight hours, until ptyalysm be produced, when all the threatning symptoms speedily disappear. We have no objection to this practice; on the contrary, we have so frequently witnessed the excellent effects of the mercurial action in typhus, and in every form of bilious disease, that we would not willingly undertake the management of a case without the privilege of resorting to this remedy. But we think that our author defers its application too long—he thinks that after coma has supervened, dependance may be placed in this remedy. We would rather exhibit calomel, in smaller doses, immediately after the intestinal canal has been well evacuated by powerful cathartics.

In our author's chapter on what Hoffman calls the *pathology of the blood*, we see nothing new, except his assurance that he has paid *considerable attention* to the question, whether the *arteries of an inflamed part beat more rapidly than those of a healthy part, of the same subject!* It is not necessary to state the result of this *considerable attention*.

The imposing title of the present work, urged it on our notice. We have thought proper to give a slight sketch of its character, though our limits confined us to a very few pages. But this is a circumstance not to be regretted:—we could not extend our review advantageously to our readers, as the book contains nothing new that may be useful, and no errors that have not been repeatedly exposed.

T. M. H.

ART. XII.—*An Essay on Venereal Diseases, and the uses and abuses of Mercury in their Treatment; illustrated by drawings of the different forms of Venereal Eruptions.* Second Edition. By RICHARD CARMICHAEL, M. R. I. A. Vice-president of the Royal College of Surgeons in Ireland, &c. &c. Octavc, pp. 376. London. 1825.

As our author observes in his advertisement, public opinion has been materially altered since the first edition of this work appeared, and "instead of the belief that no venereal complaint can be cured without mercury, it is now very generally acknowledged that every form of venereal disease may be successfully treated without that remedy." But he admits that practitioners are at present quite unsettled in their opinions respecting the best mode of treating these complaints, and that probably no two think alike on the subject. He thinks, however, that "even in the present state of uncertainty much good has arisen; for we seldom now witness a constitution run down by the excessive use of mercury; or find that *that* is now ever exhibited, when it is obvious that a consumptive tendency, or other causes, might render it hazardous to the patient's constitution." He asserts it as a fact, that the consumption of mercury has been materially lessened within the last ten years, which have succeeded to the publication of his first edition. Many apothecaries in Dublin have informed him that there is not a sixth of the quantity consumed which was formerly used in that metropolis, and he has not a doubt that even this proportion will continue to meet with a still further reduction.

He does not think, however, that the use of mercury ought to be entirely discarded in the treatment of venereal complaints; on the contrary, he believes that, when considerately applied, it will be found a most useful auxiliary; but it is merely as an auxiliary, and not as an indispensible specific, that he would wish to have it considered. These ideas are so correct, and correspond so exactly with the good sense of

every reader, that they cannot fail of ensuring a most respectful degree of attention to every opinion which Mr. Carmichael may have had occasion to advance in connexion with them. We should feel justified, therefore, in occupying our pages quite extensively with an analysis of this interesting and valuable work, were it not for the fact that the former edition has already been placed in the hands of almost every student throughout the country. On the present occasion it will only be necessary to point out to the attention of our readers such parts as appear to be either improvements or additions to the former publication of our author.

Besides the yaws, the sivvens, and the Canadian disease, he now describes two other distempers which bear no remote resemblance to the succession of constitutional symptoms in syphilis. The first of these is called the lepra septentrionalis, by Callisen, and occurs in the maritime parts of Norway, Sweden, and Russia. It is found, also, on the shores of Iceland, in the Feroe islands, and in some parts of Scotland. It is called the *radesyge*, by the Norwegians; and is placed by Dr. Holst, an author of the same country, between the exanthemata and cachexiae. It commences with lassitude, anorexia, rheumatic pains, rigidity of the limbs, dyspnœa, and violent head-ache. The face either assumes a singular shining silvery appearance, or a deep red or livid colour. These symptoms may continue for many months before the horrible condition, to which they are the prelude, ensues. A dry branny efflorescence first takes place, which renders the skin rough and thickened. Soon after, copper-coloured tubercles form on the skin, and herpetic spots on the forehead, nose, chin, lips, and eye-brows; afterwards these become scattered over every part of the body.

"The integuments of the forehead become thickened and corrugated, the eye-lids swell and are everted, the bloated cheeks assume a livid colour, in fact, the entire countenance becomes frightfully distorted. The spots afterwards degenerate into malignant ulcers, which even extend to the bones

underneath, and render them carious. Every part of the fauces is also liable to be affected with similar tubercles and ulcers which extend to the nares. The bones of the palate and nose soon become carious. Frightful deformity ensues; and the patient, exhausted by so great an extent of disease, dies of hectic fever."

This disease is not considered by Dr. Holst, who published an excellent account of it in 1817, as arising from sexual intercourse; it is attributed by him and by all others who have had an opportunity of examining it, to the mode of life followed by the northern Swedes and Norwegians, but more particularly by the fishermen inhabiting the coasts of those high latitudes. They are extremely filthy in their persons, they breathe a noxious and offensive atmosphere in small and ill ventilated huts, and they live upon the most rancid and indigestible kinds of food.

Of course, the best mode of averting this terrible distemper consists in free ventilation, cleanliness, bathing, and in the cultivation and use of esculent vegetables. Callisen thinks it may be cured in the first stage by the use of baths, and a milk and vegetable diet, with fresh animal food. Among the medicines which he recommends, are cicuta, antimonials, rosemary, &c. He thinks that mercury, when carried to the extent of salivation, is always injurious.

The second disease above alluded to, is, according to our author, peculiar to his own country, and is called by the natives *the button scurvy*. It has not been described either by Willan or Bateman, or by any other writer within his knowledge, although it is frequently met with in the Dublin hospitals. It occurs only among the lowest class of peasantry engaged in agriculture.

"The spots of this eruption are convex *tubercles*, varying from the size of a split pea to that of a shilling, seldom so large as half-a-crown; they exhibit an appearance somewhat like the surface of a raspberry, and discharge a white tenacious matter, which forms thin yellow crusts that are in general

rubbed off by the patient's clothes. The spots are seldom seen on the face, but are scattered over the trunk and extremities, and are almost always observable on the inside of the thighs, or close to the axillæ."

The general health does not appear to be much disturbed in this disease, which may continue for months and even years in the same individual. It is generally cured by the use of the warm bath, and the exhibition of pitch pills in as large doses as the stomach can bear, in the course of six or seven weeks. Our author does not think it to be infectious, but attributes it to the smoky, unventilated, and filthy habitations of the lower classes in Ireland. He thinks it may be confounded with the eruption which succeeds the phagedenic venereal disease, unless it is pointed out to the notice of practitioners.

After having described such diseases as appear to resemble the constitutional forms of syphilis, our author next proceeds to the detail and classification of those which begin by primary affections of the genital organs, and terminate in secondary contaminations of the general system. This is by far the most important part of his work,—inasmuch as until the first publication of it, practitioners had almost universally continued the indiscriminate use of mercury in every variety of genital diseases, notwithstanding the observations of Hunter, of Adams, and of Abernethy, in regard to the impropriety of such a practice. We do not know to what extent the classification of our author, as published in his first edition, has been adopted by the profession; but from the bold and decisive tone with which he now speaks of the correctness of his opinions, as tested by long and reiterated experience, we are disposed to regard it as much better established than we had before imagined. He insists upon it over and over again, that the different species of secondary eruptions always bear a determinate relation to the primary symptoms from which they originate; and he of course thinks himself justified in submitting them to the strictest rules of nosological arrangement.

In this edition he has changed the order of his classification somewhat, inasmuch as he has placed the true syphilis of John Hunter, which he supposes to have been imported into Europe by Columbus, in the last department of venereal diseases. As he has given, in the conclusion of this edition, a most excellent synopsis of his four different species, with the remedies appropriate to every form and stage of them, we will insert it without any abbreviation, instead of attempting to present an analysis of the body of the work.

I.

PAPULAR VENEREAL DISEASE.

Primary Symptoms.	*Remedies.*
1. The simple primary ulcer,	Astringent washes.
2. Patchy excoriation, attended with a discharge,	Antimonials.
	Purgatives.
3. Gonorrhœa virulenta,	Astringent washes.
	Antimonials.
	Terebinthinates.
4. Buboes.	Leeches.
	Cold applications.
	Blisters.
	Poultices.

Secondary Symptoms.	
1. Papular eruption, preceded by fever, and ending in desquamation,	General blood-letting to be adopted when indicated by the fever, and proportioned to its degree.
	Antimonials.
2. Ærithematous inflammations of the fauces.	Sarsaparilla.
3. Swelling of the tonsils and glands of the neck.	Mercury unnecessary in any stage, and highly injurious until the eruption desquamates, the fever is subdued, and the disorder is evidently on the wane; and then an alterative course of antimony and calomel may occasionally accellerate the cure.
4. Pains in the larger joints, resembling rheumatism,	*Full mercurial affection of the system, until the inflammation is subdued.*
5. Iritis,	Local bleeding.
	Blistering.

II.

PUSTULAR VENEREAL DISEASE.

Primary Symptoms.	*Remedies.*
1. The ulcer with elevated edges, without induration,	Astringent washes. Antimonials. Purgatives.
2. Buboes,	The same treatment as for the buboes in No. I. Excision of the undermined edges of the buboe.

Secondary Symptoms.

1. Eruption of pustules, in general phlyzacious, preceded by fever and terminating in ulcers, covered with thin crusts that heal from their margins, and when the disease is on the wane, the eruption desquamates into scaly red blotches.	General blood-letting, as in No. I. Antimonials. Sarsaparilla. Guaiacum. Tar ointment. Baths of sulphuretted kali. Sulphurous fumigations. Nitro-muriate acid baths. *Mercury is decidedly pernicious until the pustules terminate in scaly blotches instead of forming ulcers, and then mercurials, in alterative doses, conjoined with sarsaparilla or guaiacum, may occasionally be employed with benefit.*
2. Ulcers on different parts of the fauces, in general of a white aphthous appearance,	The same general treatment, conjoined with the following local applications: Common detergent gargles. Mercurial gargles. Oxymel Æruginis. Fumigations of Hydrarg. Sulphuret. rub. or of Hydrarg. cum creta.
3. Pains in the joints,	The same general treatment conjoined with the following local applications: Leeches. Fomentations. Bread and water poultices. Blisters. Ointment of tartarized antimony. *Mercury is to be particularly avoided while inflammation of the knee exists.*
4. Nodes,	The same general treatment conjoined with the following local applications: Leeches. Bread and water poultices. Blisters. Ointment of tartarized antimony. Division of the periosteum. *If the preceding remedies prove inefficient, mercury may be of advantage, provided the general disease is on the wane.*

III.

PHAGEDENIC VENEREAL DISEASE.

Primary Symptoms.	*Remedies.*
1. The phagedenic ulcer,	Bread and water poultices with opium occasionally added. Warm fomentations. General blood-letting, proportioned to the acuteness of pain, inflammation and symptomatic fever.
2. Sloughing ulcers,	Antimonials in nauseating doses. Opium, Cicuta, Hyoscyamus } in full doses. Purgatives.
3. Buboes,	The same treatment as for buboes in No. II.

Secondary Symptoms.	
1. Eruption of tubercles, or spots of a pustular tendency, or both intermixed, and preceded by fever, and terminating in ulcers covered with thick crusts; which often assume a conical form, healing from their centre, and extending with a phagedenic margin. When the disease is on the wane, they desquamate like those of No. II. into scaly blotches. The disease is attended with great debility, particularly when the ulcers are extensive,	General blood-letting as in No. I and II. Antimonial. Sarsaparilla. Guaiacum. Compound powder of ipecacuanha. Opium. Cicuta. Nitrous acid. Nitro-muriatic acid bath. *Mercury (with the exceptions noticed below,) increases the ravages of the disease in all its stages but the last. It may then be given with safety and advantage as in No. II.*
2. Ulcers on different parts of the fauces, and particularly the back of the pharynx—frequently engaging the entire fauces, and sometimes extending to the larynx and narex,	The same general treatment conjoined with the following local applications: Oxymel æruginis. Strong solution of muriate of mercury, or nitrate of silver. Fumigations of Hydrarg. Sulpuret. rub. or of Hydrarg. cum creta. *If these should prove inefficient, mercury may be used largely with advantage in checking the progress of the ulcerations, even though it should exasperate the general disease.*
3. Ulcerations and thickening of the larynx,	Caustic issues, or applications for moxa on each side of the thyroid cartilage. Tracheotomy.

4. Ulceration and caries of the bones of the nose,	The same general treatment with the yellow and black mercurial washes frequently injected into the nostrils. Fumigations of the Hydrarg. sulphuret. rub. or of Hydrarg. cum creta through the nares. *If these remedies fail, mercury may be used as above.*
5. Pains of the joints,	The same treatment as in No. II. for the same symptom.
6. Nodes,	The same treatment as in No. II.

IV.

SCALY VENEREAL DISEASE.

Primary Symptoms.	*Remedies.*
1. The chancre, or callous ulcer, 2. Buboes,	*Full courses of mercury for both primary and constitutional symptoms, except a tendency to phthisis pulmonalis, or other delicacy of constitution should forbid them.*

Secondary Symptoms.	
1. Eruption of scaly blotches presenting either the character of lepra, or psoriasis, and unattended with any obvious degree of fever,	*Mercury.*
2. Excavated ulcers of the tonsils. 3. Pains in the joints, tibiæ, cranium, &c. 4. Nodes.	The same local remedies as prescribed for the several symptoms in No. II.

Our present limits will not allow us to give this volume a much longer analysis; indeed, until the above extracted synopsis had been put in type, we did not discover that the edition now under notice differed very essentially from the former one, which Mr. Carmichael published about ten years ago. On examining it a little more leisurely, however, we are gratified to find that it is filled with much new and interesting matter, and that, unlike most editions of republished works, it is so carefully remodelled and altered throughout, as to become almost a different kind of publication. The details of numerous cases are, we think, judiciously omitted to make room for practical and theoretical discussions, and the original size of the book has been enlarged by some elaborate, and apparently satisfactory replies to the various objections

which have been urged against his doctrines. On account of all these circumstances it appears to us that a republication of the present edition would be of great service to the profession in this country; and it will afford us much pleasure to find that we have been, in any measure, instrumental in bringing about so important a transaction.

Several anonymous attacks have been made in the periodical publications of Great Britain, against the doctrines advanced in this work; but no one of them deserves a serious consideration from our hands, inasmuch as they have not been deemed worthy of attention by our candid and dispassionate author. The objections of Mr. Guthrie, however, were urged in so fair and manly a manner, that they have drawn forth a long and interesting reply from Mr. Carmichael. The chief point in dispute between these truly eminent surgeons lies in the question with regard to the specific nature of the primary and secondary symptoms of phagedenic ulcers. Mr. Guthrie thinks that common ulcers become phagedenic by ill treatment, and afterwards produce the same constitutional symptoms which are attributed in this work to the specific phagedenic poison. He believes, also, that indolent ulcerations may produce the same secondary eruptions as usually follow the real phagedena; and that phagedenic and sloughing sores may exist without being succeeded by any specific kind of affection. Mr. Carmichael, however, shows in a very satisfactory manner that his opponent may have been led to form false conclusions from the imperfect and hasty observations which he happens to have made upon the nature of the various kinds of ulcers which fell under his notice. Many real phagedenic sores are very slow in their progress, so that frequently they can only be distinguished from common ulcerations by the slightly undermined edges with which they are surrounded. Such might easily have been mistaken for indolent ulcers, and this, with other like mistakes, which are fully pointed out by our author, may have furnished Mr. Guthrie with the most weighty objections which he has advanced against the new classification.

M.

COMMUNICATION.

A Brief Inquiry into the Merits of the Sulphate of Quinine. By Thomas D. Mitchel, M. D. of Frankford.

The design of this essay is to exhibit to the medical profession, what is believed to be the actual character of the sulphate of quinine, as a remedial agent. A correct view of this subject is deemed to be of great importance, inasmuch as some practitioners were led to adopt and, ultimately, to reject the medicine, from the influence of example only, without pausing to examine, compare and judge for themselves. This has been the case with many other articles of materia medica; and it is probable that good medicines have been discarded, and others, altogether worthless, made popular, by virtue of a similar inattention.

Is the sulphate of quinine a valuable remedy? Is it preferable to many articles that are employed with similar designs? If these questions be susceptible of an affirmative reply, it becomes us, as judicious and honest practitioners, to yield it the meed of praise to which it is entitled. But, say some, "it is only another form of our ancient and invaluable remedy, the bark, and to give it a preference merely because it comes to us in a new shape, serves no other end than to gratify that love of novelty, which is so injurious to the profession." This kind of reasoning, however, (if by that name it may be called,) is not entitled to any weight in the present case, and could be applied with equal force to the rejection of some of the best articles in every-day practice.

It will be understood that the writer, in attempting to set forth the actual merits of the quinine, speaks for himself, and therefore presumes not to give the opinions of others. He has employed the article to a very considerable extent, and believes that his opportunities of testing its real value, have

been amply sufficient to enable him to arrive at a just conclusion. Nevertheless, let every man judge for himself.

The sulphate of quinine came into use in this region of country, in the first instance, as a remedy for the intermittents which so universally prevailed. Not that the disease refused to yield to the remedies of which we were already possessed, but because the first trials of the article in France, warranted the belief that it greatly accelerated the patients' cure. The bark had not lost its efficacy to interrupt the morbid associations by which the periodical attacks were perpetuated, but in very many instances it ceased to be remedial, because its administration was impracticable. In hundreds of cases, the irritability of the stomach was so great, or so powerful an idiosyncrasy reigned in the system, that it could not be taken in any dose, however small. Nor was that Herculean medicine, the arsenic, shorn of all its honours, by the introduction of the quinine. It was eminently successful, and had many advantages over the bark, the chief of which was, the facility with which it could be administered. But there was, notwithstanding its efficacy, a popular dislike respecting it, which was increased by the well known fact, that its use was often followed by œdematous swellings.

It is not matter of admiration, that when all the ordinary remedies for intermittents were attended by so many difficulties, the annunciation of so auspicious a medicine as the sulphate, and under circumstances so authoritative, should have been received with such general approbation. That some were extravagant in their encomiums, cannot be denied, and it will be readily conceded, that with a few it was likely to become an idolized panacea. But the illusions peculiar to novelty, however influential they may have been, in relation to the sulphate, have long since passed away, and we may now form our opinions, from the sober dictates of experience and observation.

In the common fever and ague, there is almost always so much gastric and intestinal derangement, as to render emetics

or cathartics the proper precursors of medicines intended to prevent the recurrence of the cold stage. This remark is strictly applicable to the use of the sulphate of quinine, which, so far as my experience goes, seldom failed to aggravate the subsequent attack, unless preceded by evacuants. In the common quotidians, it is rarely practicable to administer a sufficient quantity of bark during the intermission, to produce any good effect; and although the arsenic may be given without any reference to intermissions, yet from three to five days are generally requisite to effect a cure. You may, it is true, give enough bark in some quotidians, to effect a postponement of the next attack, and so, gradually to overcome the disease. But these difficulties do not meet us in the use of the quinine. A patient is attacked in the morning, at eight or nine o'clock, with a violent chill; by ten it has subsided, and the hot stage has supervened, with all its concomitants. If the proper means are not employed, the febrile stage will continue, perhaps till eight or ten in the evening, and at six of the next morning, the cold stage will return with increased force. The plan to be pursued, is to shorten the febrile stage, and so to induce the sweating stage. This is best effected by an active emetico—cathartic of calomel, ten grains, and ipecacuanha, fifteen grains, followed by a table-spoonful of spt. mindereri every fifteen minutes, together with the application of bottles filled with hot water to the surface, and sinapisms to the extremities. Rarely have I found bleeding to be necessary, but have been enabled by the above plan, to induce a proper state of the system in a few hours, to warrant the exhibition of the quinine in the following manner, *viz:*—℞ Sulph. quin. gr. x.—xii. Pulv. Caryophyll. gr. iv.—vi. m. ft. pulv. iv.—one to be taken every half hour. Thus I have generally succeeded in arresting the disease; and in order to guard against a return of it, have prescribed a grain of the sulphate, to be taken every day for several weeks afterwards. This rule should be strictly complied with.

I have seen cases of double quotidian, which, I am certain, could never have been cured by the bark, but which yielded readily to the sulphate of quinine. In one of these cases, the chill came on early in the morning, followed by the febrile stage, which continued till three or four in the afternoon, when the patient was seized with a second chill. Here it was impossible, by the most active treatment, to procure an intermission of more than one hour, and the mere mention of the bark excited nausea. In that case, eight grains of the sulphate of quinine were given in less than an hour, by which the expected chill was reduced to a trifling sensation of coldness, followed by so little of fever, as to enable the patient, previously to the hour of bed-time, to take eight grains more of the medicine. Her cure was effected, ultimately, by the daily use of one grain of the article.

The bark is not only often rejected by the stomach, but it sometimes occasions a looseness of the bowels, by which the patient is debilitated, without having any check put to his periodical attacks. This, to be sure, can be corrected by the exhibition of opium, but it is a fault from which the sulphate of quinine is exempt. It is my opinion, decidedly, that no medicine will so soon and so certainly prevent a recurrence of the cold stage as the quinine. Evacuate the stomach and intestines, and effect an intermission, and you may then exhibit the sulphate of quinine with entire confidence in the result. It agrees with the stomach much better than any other tonic with which I am acquainted.

But, however successful the sulphate of quinine may have been in the cure of ague and fever, it has appeared to me to be much more triumphant in the bilious remittents which we have had so frequently to encounter. The old methods of treating remittents, generally protracted their cure to five or six weeks. Indeed, it was common with some practitioners to affirm that it was impossible, by any means, to prevent those fevers from running their course; and it appeared to me, that, according

to their scheme, the bark answered no other end than to keep up the energies of the system, while nature conducted the patient through, what was supposed to be, the unalterable course of his disease. The sulphate of quinine has taught me, (if I had not learnt before) the fallacy of such pathological views; and from the experience I have already had, I feel as confident of being able to cut short the course of a remittent, as I am that I can relieve the pain of tooth-ache by extracting the offending cause.

It were an unnecessary waste of time to detail cases illustrative of the truth of my assertions. Suffice it to say, that I have repeatedly reduced the attendance of such cases of remitting fever, as formerly required weeks for their cure, to almost as few days, and that, mainly, by the agency of the sulphate of quinine. Nor is this the only advantage, since by a bold and timely use of this article, I have avoided the dangerous mistake of superinducing a tedious and often fatal stage of disease, which, if it be not typhus, bears a considerable resemblance to it.

The common method of treating remittents has been, to administer a cathartic or an emetic in the first instance, to follow this with some sudorific, and so soon as a remission ensued, to exhibit the decoction of bark and snake root. The latter being inadequate to subdue the tendency to a return of fever, seemed to do nothing more than act as a partial preservative of the system against the violence of febrile action. Hence it was given for days and weeks, without effecting any obvious end, until at length, to use the fashionable medical parlance, the disease ran its course, or wore itself out. The arsenic has, indeed, been more efficient in the hands of some practitioners, but it is quite inferior to the sulphate of quinine. In employing the latter article in remittents, I made it a principal object to induce a remission as speedily as possible, and then to exhibit the sulphate of quinine with so much vigour as to prevent a repetition of fever. Finding my patients,

uniformly, more or less affected with gastric and intestinal derangement, I gave, immediately, a dose, of calomel, six grains, and ipecacuanha, ten grains; to be repeated in two hours, unless the first portion acted powerfully. This was usually followed by an ounce of epsom salts, accompanied with a tablespoonful of spt. mindereri, every quarter or half hour, together with sinapisms and the like. If the head was much affected, ice applied in bladders generally gave immediate relief. Under this method of treatment, I could, for the most part, induce a complete remission within the first three days; and then, at least ten grains of the sulphate were administered in the course of two hours, agreeably to a prescription given above. This was my ordinary plan, and where no unforseen circumstance occurred to prevent its fair application, it always produced the desired effect. The febrile attack, so much dreaded, did not recur, and the decoction of bark, or small doses of the sulphate of quinine, with occasional evacuants, were fully adequate to the restoration of the patient in a week or ten days. I am now entirely satisfied, that no practitioner can, without criminal neglect, suffer an ordinary remittent to run its course, and so confine the patient to his bed four, five, or six weeks. He need no longer be the obsequious servant of nature, but may control her at his pleasure.

As a tonic in simple debility, I have been much pleased with the sulphate of quinine, and have found it greatly serviceable in cases where I could not use any other preparation of the bark.

The modes of administering the sulphate of quinine are various. For a long time I preferred the pill, and generally found that patients took it more readily than any other preparation. Small children, however, take the liquid dose best; I mean the solution of the sulphate in mint or cinnamon water, with sugar and gum arabic; and perhaps this is the best preparation that can be given in such cases. In several instances, I found it impracticable to administer the quinine un-

less I resorted to a species of deception which I believe to be perfectly warrantable in like circumstances. A prejudice had obtained against the "pills," as the medicine was commonly called, and patients would not take them. It was necessary to give assurances that the disease could be cured without resorting to the "pills," and then I prescribed the powder in combination with cloves or ginger. For an adult, the following was the ordinary recipe:—Sulph. of quin. gr. x. —P. caryophyll. gr. vi.—m. ft. pulv. gr. iv.—one to be taken every half hour. This plan proved to be the best I could employ, since I was able to give a large dose in a shorter period of time, than by any other mode. Taken in syrup of any kind, these powders have a taste differing but little from the common tonic powders, and are swallowed without objection. In remittents, this is decidedly the best way of giving the sulphate of quinine. There is another mode of administration with which I have been highly pleased, especially in the cases of aged persons. It is as follows, viz:—℞ Sulph. quin. gr. vi.—x.—Tinct. C. Peruv. Hux. ℥i, elix. vitroil, ʒi, aquæ pur. ℥ij—m. Take a tablespoonful every two hours.

The impure sulphate of quinine, known by the name of the *brown extract*, obtained some reputation in the treatment of intermittents; but I am sorry to be obliged to dissent from several of my medical brethren respecting its claims. I gave it frequent trials, but was compelled to lay it aside, because, on the whole, it proved to be much inferior to the pure sulphate. In many instances, it sickened the patient considerably, and frequently failed to effect a cure. In my hands, the pure sulphate has never occasioned vomiting, and seldom much nausea, where proper evacuants had preceded its use; its success, moreover, has been uniform.

In addition to the modes of using the sulphate of quinine, already stated, I have given it in Lisbon, Madeira, and other wines, and think the preparation an excellent preventive ton-

ic, and as such entitled to a place in every family, exposed to the miasmata, or other sources of ague and fever.

There is another preparation of the sulphate of quinine, which I cannot omit to notice in this place, as being admirably suited to cases of defective tone of the stomach and alimentary canal, attended with occasional spasmodic pains. It must be preceded by proper evacuants: ℞ sulph. quin. gr. viij.—x.—carb. ammon. gum camphor, āā gr. x.—P. G. arab. et sacch. alb āā ʒij aquæ memthæ p. ʒvi.—m. s. a.—Dose, a table-spoonful every hour or two, according to circumstances.

The sulphate constitutes an excellent substitute for colombo or gentian, in the tonic powders, and in this way I have frequently used it. ℞ sulph. quin. grs. x.—rub. ferri ʒi. P. caryophyll. ℈i—m. ft. pulv. x.—One to be taken every three or four hours, in syrup.

Very many objections have been raised against the sulphate of quinine. Of these I shall not condescend to take any notice, believing them to have originated, generally, in motives unworthy of the medical character. Others have been urged with that candor and sincerity that entitles them to respectful consideration. It has been alleged that head-ache has been a more common disease, since the general use of the sulphate, than previously to its introduction. That this may have appeared to be the fact, in the experience of some physicians, I cannot but believe. As respects my own observations, however, I am bound to exonerate the remedy from this charge. I have not met with the smallest increase of cephalic affections since I have exhibited the sulphate of quinine.

Our medicine has also been accused of inducing hemorrhages and convulsions, and at the first view, this charge may appear to be a little plausible. In regions of country where, during the last three years, intermittents have prevailed almost universally, there were many cases of hæmorrhage among adults, and of convulsions in young children, and as the quinine was in general use, these effects were ascribed to

its agency. By a little attention to this allegation, I have ascertained, that in my own practice, the proportion of cases attended with hæmorrhage or convulsions, was quite as large before as after the introduction of this article. I witnessed both these concomitants of the epidemic, while I gave the arsenic alone, prior to the use of the sulphate in this country. And as respects these or any other pernicious effects of the sulphate, my experience is altogether without evidence.

As regards the cost of the sulphate of quinine, whatever clamours may have been raised against it in its early history, there can be no ground of complaint now. It is as cheap a remedy as the best bark at the ordinary price; but when considered in connexion with its more speedy operation, the comparison between it and any other article is decidedly in its favour.

The result of our inquiry seems to be, that although the bark, arsenic, &c., are really good medicines, yet that the sulphate of quinine is much better. That while we admit the curative powers of the former, we have a right to insist upon the superior virtues of the latter; and this, chiefly, because it is a remedy of universal application, or, in other words, because all patients can take it in one form or other, which is true of no other remedy for intermittents or remittents. That the sulphate of quinine may not yet be superseded by a better remedy, we venture not to affirm, because we regard our knowledge of cause and effect, in reference to the cure of disease, as being only in its infantile state. Our duty, however, is to take a stand, and to form our views according to the existing state of things; in so doing, we cannot but subscribe to the superiority of the quinine over every known article, as a remedy for those forms of disease for which it is professedly designed.

ANALECTA.

1. *Nervous Pregnancy.*—Some of our readers, not deeply versed in obstetric literature, may start at seeing the title of this short article. But many of the most celebrated accoucheurs have witnessed or written on this species of pregnancy. Baudelœque says he saw more than twenty cases of it, some of which continued for several years. M. Gerard, of Lyons, has published a memoir on this subject; but the present case, related by M. Russel of Vars, in the first number of the Gazette de Santé for the present year, is, perhaps, the most remarkable on record.

Case.—Mary Gibaud, residing at Vars, department of the Charente, had enjoyed good health previous to her marriage. Shortly after this epoch, she became apparently pregnant. The menses ceased—nausea and morning vomitings occurred—the abdomen enlarged—the motions of the fœtus were felt or supposed to be felt—in short, every symptom of pregnancy was present. At the end of nine months, labour-pains commenced, and went on increasing for thirty-six hours. The midwife, unable to make out the case, called in a surgeon of great reputation. At the moment of his arrival, the patient had just fainted from a considerable uterine hæmorrhage, and the surgeon quickly proceeded to deliver. He was not a little surprised to find the uterus in an unimpregnated state. On recovering from syncope, the labour pains had gone, but in two or three hours they returned as violent as ever. The surgeon now bled her copiously from the arm, and all the unpleasant symptoms vanished. During a month, she continued well—the abdomen still large. At the end of this period, the nausea and vomitings again commenced, and the usual symptoms of pregnancy went on for nine months, when the (apparent) labour pains again recurred, and again ceased, after a natural and artificial loss of blood similar to that stated above. Then a month's interval, and then again symptoms of pregnancy, and so on. This state continued for three or four years, when the case getting abroad, the patient was visited by several professors of different universities. In the fourth year, she was carried to the hospital of Angouleme, where the physicians considered the case as dropsy, and paracentesis abdominis was performed, but without evacuating any fluid. She recovered as usual, and went on for twenty years with all the symptoms of pregnancy, and every nine months a kind of attempt at parturition, to be relieved only by uterine hæmorrhage and a copious bleeding.

For the last five or six years, the patient has every month been subject to an abscess in the left ear, from which a sanguineous puss was discharged. During the whole of the twenty years, her breasts were gorged with milk. She died in the fifty-first year of her age, in consequence of inflammation spreading from the ear to the brain. M. Russel and another medical gentleman examined the abdomen, where they found every organ in a state of integrity, but a considerable quantity of fat in the omentum.

Johnson, Sept. 1824.

---

2. *Simulated diseases.**—Mr. Hutchinson has related a great many curious instances of feigned diseases among our seamen during the late protracted war, his situation, as a surgeon of the Royal Naval Hospital at Deal, having afforded him ample opportunities of witnessing, and often detecting, such impostures. We shall glance at some of these.

---

* Mr. Hutchinson, Med. and Phys. Journal, Feb. 1824.

1*st. Ulcers.*—These have been formed and kept up by first incising a piece of skin, and then applying a blister, quick lime, mineral acids, &c. In a limb which Mr. H. amputated, he found a piece of copper coin imbedded between the gastrocnemius and soleus muscles. The man confessed that he had thrust this substance into the ulcer, about nine months previously! The usual security against such tricks, is a well-applied bandage, from the toes to the knee, sealed with wax; but this was found inefficient, as pins were thrust through it, and the ulcer irritated. A wooden box was then placed round the limb, which proved effectual in preventing such practices.

2*d Diarrhœa.*—Our author has known diarrhœa, and even dysentery, induced in hospitals, for the purpose of invaliding—sometimes destroying the life of the infatuated self-tormentor. The means most resorted to by our seamen, were mixtures of vinegar and burnt cork, by which some of the finest young men in the service destroyed themselves.

3*d. Fever.*—This is a disease which Dr. H. has known to be feigned; he relates a case where a French prisoner swallowed tobacco, and covered his tongue with soap. The tobacco caused great rapidity of the pulse, but the matters ejected from the stomach smelled so strongly of tobacco that the imposition was soon detected, and confession followed.

4*th. Contraction of hands, elbows, knees, &c.*—These are very frequently feigned by sailors. They can only be detected by carefully attending to a variety of circumstances, and taking the impostors off their guard.

5*th. Opthalmia* has been produced by putting irritating substances into the eyes, as alum, lime, tobacco, &c.

6*th. Incontinence of urine.*—The best mode of detecting this imposture, in our author's experience, was the exhibition of laudanum, unknown to the person, and, when fast asleep, to place a clean napkin under him. The napkin, of course, will remain dry during sleep, if the disease be feigned; but be soiled, if real.

7*th. Strictures.*—This disease was often feigned by naval officers, when they wanted to leave their ships, from any cause of dislike to the captain or others. Mr. H. generally detected it by placing the person against a wall, so as not to admit of retreat. A bougie was then passed into the urethra, when, in many cases, much difficulty was experienced in getting it beyond the perineum. If suspicion of imposture be entertained, the mind of the patient is to be drawn off, if possible, and an opportunity taken of passing the bougie into the bladder. Are we not liable to some error here: when spasmodic stricture exists, which may allow the bougie to pass occasionally, though it may be a very troublesome complaint to the patient in general?

8*th. Hernia.*—Mr. Hutchinson remarks that, although seamen are very liable to ruptures from their great exertions, in furling sails, heaving up anchors, and working the great guns, yet the operation for strangulated hernia is very seldom necessary. This we know to be the case; but then we think the same remark extends to private life. There is not, we think, one case in five thousand which requires the operation, throughout England. Seamen, too, have immediate medical assistance, when an accident happens, which, of course, diminishes the chance of serious results. Mr. H. concludes this paper with a curious instance of voluntary power over the cremaster muscles, possessed by a man who could draw the testicles up into the groin, so as to produce the appearance of hernia there, and afterwards let them drop down to the bottom of the scrotum, when the examination was over. Mr. Hutchinson was, however, too lynx-eyed an observer to be deceived by this; for although the tumours in the groin puzzled him at first

sight, he soon proved an alibi of the testicles from their proper domicile in the scrotum, and saw them peeping through the pope's eyes. The man, on being detected, acted like a philosopher, and seeing no longer any chance of eluding the king's service, displayed before us several very remarkable feats of power he possessed over these organs.

Johnson's Journal, Sept. 1824.

—

3. *Christison on the detection of minute quantities of Arsenic in mixed fluids.*—The object of this paper is to estimate the value of the liquid tests for arsenic, when dissolved in mixed vegetable and animal fluids, and of the various processes which have been proposed for correcting the changes thus produced in the action of the tests; and, finally, to determine what mode of analysis is, at the same time, the simplest, and may be applied under all circumstances. The author has extended the researches of orfila, and those on the modifications caused in the action of the tests by the coexistence of animal and vegetable fluids; and shows, by the instances of broth, tea, coffee, porter, port-wine, and milk, that, when the fluid is complicated, or deeply coloured, and the arsenical solution of such moderate strength as may be usually looked for in medico-legal investigations, the four best liquid tests—namely, lime-water, the ammoniacal sulphate of copper, the ammoniacal nitrate of silver, and sulphuretted hydrogen, are almost or absolutely useless. He next proves that no advantage is to be derived from the plans which have been proposed for restoring the true action of the tests, by destroying the colour of the fluids. These are two in number: the one advanced by Orfilal, in 1821; the other by Mr. Phillips, in January last. The former chemist proposes to destroy the colours by chlorine; the latter by digestion with animal charcoal. But Dr. Christison finds that, after the action of chlorine, the colour is seldom altogether or sufficiently destroyed, that the process does not take from the fluid the power it often possesses of retaining the arsenical precipitate in solution, and that, in some decolourised fluids, containing no arsenic, some of the tests cause precipitates very similar to those produced in pure arsenical solutions. He likewise finds, that the process by digestion in charcoal is sufficient, because, if the solution is not very strong, the charcoal removes all or nearly all the arsenic, as well as the colouring matter, and, if the solution be strong, it does not always lose its property of retaining the arsenical precipitates dissolved. He then proceeds to examine the processes which have been recommended by Rose and Rapp, for discovering arsenic, when intimately mingled with the animal textures, and which might also be applied to the residue by evaporation of mixed fluids, in which the common tests do not act characteristically. These processes it is unnecessary to mention. They are founded on the possibility of arsenic so combining with animal matters, as to resist the solvent power of boiling water. But Dr. Christison has found that, after careful digestion in water, no arsenic can be detected by either process; and, farther, that the process of Rapp is otherwise insufficient, when the quantity of arsenic is small, in which circumstance alone the ordinary means of analysis are inadequate. In the last place, he describes the method which he has found easiest of execution, and most generally applicable for detecting arsenic dissolved in mixed fluids, or mingled with such solids as are incapable of forming with it an insoluble compound. Minute directions are given, for the sake of the inexperienced; but we shall notice only the essential parts, and the result of his experience with respect to the delicacy of the method. Having observed that the sulphuretted hydrogen, though it seldom acts characteristically on diluted solutions of arsenic in mixed fluids, nevertheless, always throws it down of

some colour or other, even when the proportion of poison does not exceed an eight thousandth part, he proposes to employ this test with the view of procuring the arsenic in a convenient form for being subjected to the decisive process of reduction.

"The suspected matter, if solid, is to be divided into minute fragments, and boiled briskly in two or three successive portions of pure water. The fluid, whether originally such, or procured by digestion from the solid matter, is then to be subjected in a deep, narrow glass, for half an hour, to a brisk stream of sulphuretted hydrogen gas. In many cases, however, it will be necessary to premise the two following preparatory steps, before transmitting the gas; and, as we can seldom know before-hand whether these steps are requisite or not, it may be right to resort to them in every case. The first precaution is to add a little acetic acid to the fluid. By so doing, the influence of any free alkali that may exist in it is counteracted; and several organic principles, which might impede the subsequent separation of the precipitate, are coagulated. The second precaution is to boil the fluid for a few minutes; by which means some matters are separated, that the acetic acid could not throw down entirely; and any carbonic acid existing in it is driven off. The presence of carbonic acid in considerable quantity, by impeding the solution of the sulphuretted hydrogen, prevents its action on the arsenic, if the proportion of arsenic be small. The fluid is then to be filtered.

"When the stream has been continued a sufficient length of time, there is either a precipitate formed, or the fluid acquires a yellowish milkiness, which passes to a distinct precipitate as soon as the excess of sulphuretted hydrogen is driven off by heat. It is always right to boil before attempting to separate the matter thrown down; as the precipitate then becomes much more distinct, and falls to the bottom more readily. When the filtration is finished, and the filter has been gently compressed between several folds of bilbulous paper, the precipitate is to be scraped off with a knife, and dried on a bit of smooth paper, at a temperature somewhat above 212°."

The most advisable mode of subjecting this to the test of reduction is the following:—The best flux is the black flux, and the best instrument a glass tube about three inches long, and varying from a fourth to an eighth of an inch in diameter, according to the bulk of the material, which should not fill above three-fourths of an inch of the tube. The best mode of applying heat is by the alcohol lamp, as recommended by Mr. Phillips. "The true arsenical crust is known by the following physical character: Its outer surface next the tube exactly resembles highly polished steel. Its inner surface (which is best seen by scratching the tube with a file at the lower margin of the crust, and snapping it across,) is precisely like the fracture of fine steel, if the quantity is considerable: if it is minute, it has a dull bluish-gray appearance, but, before a microscope of four or five powers, appears brilliant and crystalline, like the fracture of steel. Occasionally, when very minute in quantity, it appears botroyoidal, and not brilliant, even before the microscope: in that case, the part of the tube to which it is attached should be coarsely powdered, and heated anew in a tube of less diameter. It is scarcely possible for any one to mistake these characters, particularly if he has ever seen an arsenical crust before; but, to prevent all possibility of error, the analysis may be concluded with the following experiment:—The part of the tube to which the crust is attached, being broken into fragments, is to be left for some hours in a watch-glass, containing a dilute solution of the ammoniacal sulphate of copper, and covered to prevent evaporation. In four or five hours, the metallic crust will become grass-green, or if very minute, it will be discoloured, and a brilliant grass-green crust formed on the surface of the liquor. The simple evaporation

of the fluid will cause the formation of a crust on its surface, though no arsenic be immersed in it. But in that case its colour is pale blue.*"

The author concludes by stating that the evidence thus procured is quite unimpeachable: that the process is the most convenient yet proposed; that it is probably applicable to all cases without exception, as he has found it to answer with the most complicated fluids he could select,—namely, broth, tea with cream and sugar, coffee similarly made, porter, port wine, and milk; and that it is sufficiently delicate for all medico-legal purposes, as it will detect satisfactorily a-quarter of a grain of arsenic, dissolved in 8000 parts of any of the foregoing fluids.—*Lond. Med. and Phys. Journ. Dec.* 1824.

—

4. *Bad effects of Ergot.*—M. Gerardin lately read to the Academie Royale de Medecine, an account of certain deleterious consequences, resulting from ergot, when employed to facilitate labour:—he stated, that in the colonies, this substance is looked upon as a sure means of producing abortion, and destroying the life of the fœtus in utero:—he therefore is of opinion, that it ought not to be administered without the greatest caution, and that it ought only to be employed in certain cases of want of action in the uterus during labour, or to expel hydatiform masses developed in its cavity.—*Revue Medicale, Sept* 1824.

—

5. *Common Salt to correct the Fœtor of Cancerous Sores.*—M. Siaboun relates the case of a female with a cancerous ulcer in the right breast, who suffered extremely from the fœtor of the discharge, which was so intolerable, that the persons who assisted in dressing the wound, could scarcely remain in the room. M. Siaboun ordered a lotion of salt, dissolved in water, to wash the parts: the disease was not arrested by these means, but the fœtor was entirely destroyed.—*Journal Medicale de la Gironde.*

—

6. *Effect of Counter-irritation.*—Mr. Ogden has related, in the Medical and Physical Journal, a case illustrative of the effect of extensive counter-irritation. The patient was a child, six years old, who had been affected with cough and copious expectoration from the earliest period of life. During the last two years he had also been subject to epileptic fits, recurring at intervals of nine or ten weeks. But these were always brought on, or preceded by a deranged state of the alimentary canal. On the twenty-second of October, 1821, the child's clothes took fire and he was dreadfully burned—the skin being removed from the whole of the thorax in front, and a considerable portion of the abdomen—added to this, the turpentine dressing produced an extensive erythema of the skin. In consequence of these irritations, the pectoral and epileptic complaint disappeared.

—

7. *Cases of Chronic Cephalalgia.* By Lewis Frank, M. D. &c.—A number of physical and moral causes, says Dr. Frank, may produce chronic cephalalgia. Although many of these are readily apparent, yet cases occur in which they are by no means manifest, or are of such a nature as not readily to suggest themselves to the mind of the practitioner. In many of such cases, therefore, the treatment cannot proceed upon pathalogical principles,—the physician must then have recourse to a rational empiricism. Without being new, the following cases may be recollected with advantage:——

---

* If portions of the crust are simply exposed to the air, they soon acquire a grayish-black colour on the surface, a character also indicative of metallic arsenic.

Case 1.—When at Newstadt, near Vienna, in 1815, I was informed that a woman who had been distressed with severe cephalalgia, and obliged to keep her bed during seven years in consequence of the violence of the pain, was cured, as if by enchantment, after the expulsion from the nose of about fifty worms, accompanied with mucus. Wishing to ascertain the truth of this statement, I visited the woman, when she confirmed the fact, and added, that she had consulted, previous to this occurrence, several physicians, and employed without benefit a great variety of remedies. Despairing of relief, anxious to hazard every means, and observing that her mother was in the habit of giving her brothers and sisters a powder consisting of the semen contra, (artemisia santonica, worm seed) valerian, and assafœdita, as a vermifuge, she formed the resolution of taking it in the form of snuff. This powder occasioned great sneezing, and the evacuation of much mucus, followed by several living worms. She continued her remedy, and in the space of about a month she discharged from the nose the number of worms already mentioned. She was completely cured of her complaints, returned to her occupations, and now, four years after the occurrence, remains well. The noise which this circumstance occasioned in the village, induced all who have since been affected with head-ache to resort to this powder for relief, and many have actually derived advantage from the use of it.

Case 2.—In 1818, when visiting the Hospital of Incurables of Yps, in Upper Austria, the physician of that institution showed me a female who had been tormented for several years by violent head-ache, occupying chiefly the forehead and vertex. She had discharged a number of worms from the nose, having the form of small lumbrici, or larvæ of considerable size. Several of these worms were preserved in spirits, and sent to Bremser at Vienna; but this celebrated helmenthologist could not be precise respecting the species, as the too-concentrated spirit which had been employed for the purpose of preserving them had altered their structure. The patient had been treated by a solution of *oxymuriate* of mercury and valerian. She assured me, that each time she discharged these worms, her head-ache was relieved for a time.

Case 3.—A female, forty-six years of age, came to consult me at Parma, for severe cephalalgia, which had continued four years. The pain occupied the whole head, and seemed to be seated in the pericranium (rheumatic cephalalgia.) She had been treated by several physicians without having derived benefit. This patient had the appearance of health, and the natural functions presented no disturbance. I was embarrassed as to what treatment I should adopt. Believing the disorder, however, to be of a rheumatic nature, I prescribed a powder consisting of two grains of the sub-muriate of mercury, and a grain of the yellow hydro-sulphate of antimony, with a little sugar, to be taken twice daily. A year afterwards, I saw this patient, who informed me that she had been completely cured of her head-ache after having used this powder for a month.

Case 4.—A goldsmith, at Verona, in 1822, of a good constitution, aged forty-four, consulted me on account of a violent cephalalgia, obliging him sometimes to keep his bed, and producing vomiting. I supposed that the disease was owing to the mercurial and arsenical vapours, and therefore decided on prescribing the same powder that I had administered to the subject of the third case, with the addition of the infusion of *artemisia virescens* every morning. Passing through Verona, in 1823, this goldsmith called on me, and informed me that he had experienced no cephalalgia during the eight preceding months. He stated, that a few days after he had commenced the use of his medicines, he had passed by stool a great number of large lumbrici. It may be remarked, that the *artemisia virescens* possesses greater anthelmintic virtues than any other bitter substance.

Case 5.—A lady, aged forty-five, of a delicate habit, and pale, complained of violent cephalalgia, in paroxysms of three or four hours duration. Conceiving that it might originate from the state of the abdominal viscera, I administered an emetic and gentle purgatives, but without advantage having been derived from them. Valerian, cinchona, &c. were also prescribed, with the same result. The patient having remarked, that the presence of cold water in her mouth gave relief, I was induced to examine her teeth: the molares were affected with caries. The affected teeth were removed, and the cephalalgia disappeared without further treatment.

Annali de Medicina, June, 1824.

—

8. *On the method of counteracting Uterine Hæmorrhage, proposed by* Dr. Gooch.—Since the publication of Dr. Gooch's paper, (12th vol. Medico-Chirurgical Transactions,) on the hæmorrhage which sometimes follows the expulsion of the placenta, and the contraction of the uterus, I have had an opportunity, (says Mr. Crowfoot,) in three cases, of witnessing the good effects of the preventive treatment which he recommends.

Mrs. G——, in three previous labours, had suffered from a frightful hæmorrhage, which followed the expulsion of the placenta, after an interval, varying in the different labours, of from five to twenty minutes, notwithstanding the uterus had actively contracted. This patient having been again pregnant, I determined to try strict antiplogistic treatment for five or six weeks prior to her confinement. The consequence was, that she altogether escaped the hæmorrhage.

Mrs. A——, a lady of sanguine temperament, but delicate constitution, in her two first labours, had rather more than the usual discharge after the removal of the placenta. In her third labour, the placenta was expelled as usual, the uterus actively contracted, and no hæmorrhage followed for at least twenty minutes, when a most apalling one burst forth, and was with difficulty restrained by the most prompt and continued treatment. In her fourth pregnancy, the antiphlogistic treatment was pursued as in the former case, and with the same satisfactory result.

In another patient, Mrs. L——, similar hæmorrhages had occurred in two previous labours: in a third pregnancy, the antiphlogistic treatment prevented this inconvenience in the following labour.

In none of these cases did the hæmorrhage immediately follow the expulsion of the placenta; an interval of from five to twenty minutes intervened; and I therefore infer, that a degree of relaxation of the uterus preceded the hæmorrhage, and was as essential as the existence of the phlogistic diathesis. We find that the only remedies upon which we can depend in these cases, are such as have a tendency to produce firmer contraction of the organ. The sudden application of cold to the abdomen, steady pressure externally on the uterus, and the introduction of the hand into its cavity. *Edinburgh Med. and Surg. Journal.*

—

9. *Effects of castration in certain animals.*—M. Fanneau Delacour, of Souzay, has performed a number of experiments upon sheep and chickens, with a view of determining the effect of castration upon the animal economy, conceiving that the loss of organs so important as the testicles, could not take place without materially affecting the health; which opinion was strengthened by considering the sudden evils often arising from more trifling causes,—such as the disapearance of eruptions, or the drying up of long-established ulcers. M. Delacour had eighty chickens castrated in his presence. Eleven of these exhibited well marked signs of cerebral affection, and in three others the symptoms were observable, but not to so great a degree. Of eight which became mad, four of the worst, as well as

two out of three which were threatened with apoplexy, were cupped upon the rump, and an actual cautery applied on each side of the cupping glass; and, in the four first instances, a cautery was also applied on the head. All these recovered; one left entirely to the efforts of nature, died on the third day—the brain exhibiting the strongest marks of inflammation. The same phenomena were observable among a flock of sheep, and in a greater proportion. The same remedies were made use of in seven of these animals, and they all recovered: whereas, two, left to nature, died; one on the fourth day, with all the marks of madness; the other, on the second day, in a state of coma. The examination of the heads, showed, in the first instance, a violent state of inflammation of the brain and its membranes; the brain of the second was softened, and the ventricles filled with a fluid resembling the white of an egg a little coloured.—*Journal Universal des Sicences Medicales.*

—

10. *Hydrocyanic acid in Tœnia.*—M. Galneche of Stetin, records the following case. A boy, three and a-half years old, who was afflicted with the *tœnia lata*, was recommended to eat strawberries for two days in as great quantities as he pleased, the author observing that when the presence of this worm is suspected, the strawberry generally produces a discharge of some few portions. The third, at six in the morning, ℥ss. of castor-oil was given; at half-past six, at seven, and at half-past seven, he took each time fifteen grs. of the powder of male fern root; and at eight o'clok, six drachms of castor-oil. At half past eight an abundant serous motion took place, and a quarter of an ell of the worm escaped from the anus; the little patient was then placed upon warm water, into which the worm was suffered to be suspended; it was slightly laid hold of at the orifice of the anus, and rubbed over for the space of four inches, with hydrocyanic acid. It immediately made strong efforts to return to the abdomen, so that it was obliged to be held with some degree of force; it suffered some convulsive motions, and was expelled the length of an ell and a half. At the termination of an hour and a half another evacuation produced the remainder of the worm, two ells long; the animal was dead, it terminated in a threadlike extremity, surmounted by a reddish head of the size of a millet seed, armed with a little sucker.—*Journal der Praktichen Heilhunde.*

—

11. *Martinet on the Nerves.*—According to this author, inflammation of the nerves is a cause of neuralgia, but among the least frequent. This inflammation has its seat in the neurilima, &c. in the cellular tissue which unites the nervous filaments together. It has for a constant mark the development and increase of pain on pressing the affected nerve. This inflammation differs from neuralgia proper, which consists solely in the alteration of the sensibility of the medullary substance, in which the pain is not always agravated by pressure, and in which it is always subject to remissions.—*Lond. Med. and Phys. Jour.*

—

12. *Miningene.*—The farther we see into the animal economy, the more we shall be convinced of the intimate sympathy between the alimentary tube and the sensorium. Dr. Scoultor of Mentz has published, in the *Journal Universal des Sciences Medicales*, some anatomo-pathological researches on this subject, for the purpose of illustrating the connexion between irritation of the mucous membrane of the intestines and the pia mater. He thinks that diseased states of the latter delicate membrane have been often overlooked, in consequence of the changes in its structure not being very conspicuous to the hasty and superficial observer. We conceive, however, that the changes of structure in this tissue are more easily detected than those in most other parts of the body. In a healthy state, this web is per-

fectly transparent, thin, and colourless, and without adhesions. Any deviation from this state, therefore, must necessarily be one of disease. It is no doubt desirable, but seldom practicable, to have a healthy brain to contrast with an unsound one prosecuting *port mortem* researches. This was the plan pursued by Wenzel in examining the brains of epileptic patients. Dr. S. thinks that all parts of the intestinal canal do not equally sympathise with the brain. The stomach and small intestines possess a much closer affinity with the meninges than the great intestines. While inflammation of the mucous membrane gives rise to corresponding disturbance in the *pia mater*, this last remains free from all sympathy in peritonics. When the mucous membrane of the stomach or small intestines is inflamed, Dr. S. has observed the vessels of the *pia mater* injected with blood, forming red patches, and sometimes amounting to extravasation. These appearances are chiefly found in the anterior and lateral parts of the brain—unless the abdominal inflammation be very violent; in which case nearly the whole of the *pia mater* is affected, its minute vessels carrying red blood and giving rise to effusion and adhesions. Dr. S. thinks that these views are likely to bear and elucidate many of the phenomena of apoplexy, on the principle that every inordinate excitement of the stomach being communicated to, and, as it were, repeated in the brain; thus occasioning determinations of blood to the head, and rendering its vessels gradually more debilitated, and ready to give way under any increase of action.—*Med. Chirurg. Rev.*

—

13. *M. Savart on the Ear.*—M. Savart has published the results of numerous experiments, made with a view of ascertaining the uses of the membrana tympani and internal parts of the ear. Referring to the paper itself for the details,* we must content ourselves with enumerating the conclusions at which he has arrived. They are—1st. That the communication of vibrations by means of air appears to observe the same laws, at least with respect to minute distances, as those which govern solids. 2d. It is not necessary to suppose, as has been done heretofore, the existence of a particular mechanism to make the membrana tympani always vibrate in unison with the bodies which act upon it. 3d. That the degree of tension does not vary, except to augment or diminish the amplitude of its excursions (*excursions,*) as supposed by Bichat; but with this difference, that M. Savart's experiments prove the reverse of Bichat's conjecture, which was, that the membrane was relaxed by powerful impressions, and became tense from those which were feeble. 4th. That the vibrations of the membrane are communicated without alteration to the labyrinth, by the medium of the ossicula, as the vibrations of the upper table of a musical instrument are transmitted to the lower. 5th. That the ossicula likewise modify the extent of movement in the vibrating parts contained in the labyrinth. The author further thinks that the extent of the membrane of the tympanum in different animals influences the number of sounds which they can perceive, and likewise the limits at which these sounds commence, or cease to be perceptible to the animal.—*Lond. Med. and Phys. Jour. Jan.* 1825.

—

14. *M. Mondini on the Eye.*—A paper of some interest has been published on the Eye, by M. Mondini, of Bologna. It relates chiefly to the pigmentum nigrum, which he asserts to be properly no pigment, but a true membrane. The black colour, he affirms, is owing to the presence of minute particles of oxid of iron, which may be separated by the loadstone.† *Ibid.*

* *Journal de Physiologie*, No. 2, 1824.
† *Oper. Scient. dell Univer. de Bologna.*

15. *Dr. Knox on Comparative Anatomy.*---Dr. Knox, whose researches in comparative anatomy have procured for him a place among the most industrious naturalists of the day, has published some remarks on the lacteal system in the testaceous mammalia, which are of importance, both as they disprove a position of the celebrated Tiedeman, and as they bring us back to an old doctrine, which had been invalidated by the assertions of the naturalist above mentioned. Tiedeman had been led to suppose that, in some animals, as the seal, the chyle having been conveyed to the mesenteric glands by the common lacteals, (viz. the vasa afferentia,) was there absorbed by veins only, and thus conveyed directly into the blood, without passing along the thoracic duct; and, consequently, that this duct was destined, in all such animals, for the transmission of lymph alone. Dr. Knox has succeeded in demonstrating the vasa *efferentia* as well as *afferentia*, and showing, by a preparation deposited in the museum of the College of Surgeons in Edinburgh, that they may be injected with quicksilver. Thus, we return to the established opinion, that there exists, in all animals with which we are acquainted, a peculiar set of vessels, whose proper business it is to convey into the blood the nutrient fluid derived from the food.*—*Ibid.*

---

16. *Dr. Francini on Absorption.*—Dr. Francini has performed a series of experimental investigations relative to Absorption, of which the following are the most important results:—1. That the lymphatic vessels of the intestines are those which absorb the chyle. 2. That it is not demonstrated that they absorb any other fluid in the intestinal cavity. 3. That there is no solid argument tending to prove that the lymphatics of other parts are absorbents. 4. That it is certain that the veins of the intestines, of the abdomen, and bronchiæ, absorb. 5. That experiment has not made it obvious whether the lymphatics or veins absorb the fluids existing in the cavities of the cellular tissue, &c. 6. That, from numerous experiments, both in the state of health and disease, it is probable that the absorption of fluids in the cavities is, in a great measure, performed by sanguiferous vessels.†—*Ibid.*

---

17. *M. St. Vincent on Generation.*—The subject of Generation has recently received considerable attention, if not much elucidation, from several physiologists. The observations to which we allude are principally directed to the spermatic animalculæ. The existence of these is asserted, by M. St. Vincent, to admit of ready demonstration, by taking the testicle of an animal recently dead, and making a puncture in it; the semen oozes out, and a small portion of it is to be examined through a microscope. The animalcules are so numerous, that they scarcely have room to move; but, if the semen be diluted with water, they become separated, and are more easily subjected to scrutiny. Their resemblance to tadpoles is said to be striking. Various other particulars are detailed in the paper from which these remarks are taken.‡

MM. Prevost and Dumas have likewise instituted experiments connected with this curious subject.§ They deny the influence of the aura seminalis, deem the spermatic animalculæ necessary, and hold that the semen must be actually introduced into the uterus in order to produce impregnation. If this be so, there are some anomalies to be explained.—*Ibid.*

* *Observations on the Anatomy of the Lacteal System in the Seal and Cetacea;* by Dr. Knox, &c. Edinburgh Med. and Surg. Journal, July, 1824

† *Opuscol. Scient. di. Bologna,* No. 1.

‡ *Journal de Physiologie.*

§ *Dictionaire de Medicine,* art. Generation.

18. *Utility of Fresh Vegetables in Fever, when placed near the Patient.*—We have received a letter from Mr. S. Shatte, of Stockenham, Devon, the purport of which is to call to our notice a practice formerly recommended by some of the ancient writers on medicine, and which, he says, he has found of great service in fevers of the typhoid kind. A short extract from our venerable correspondent's letter will explain his meaning sufficiently.

"In 1821, when typhus fever was very prevalent in this neighbourhood, I made several trials of this remedy. G. F. in the village of Chillington, was taken ill with that disease, having a wife and two children, with only two small rooms up stairs; I immediately had the rooms and the bed covered with wet bushes or boughs of ash, hazle, willow, or any green shrubs that could be procured. The old ones were carried out, and fresh ones brought in every morning: and I am of opinion that, when they are brought in with the dew upon them, they are more efficacious: at all events, they must be made very wet with cold water, and be in considerable quantities, so as to cover the whole room."

In one case, our correspondent adds that they appeared to revive a patient almost at the point of death.

Mr. S. adds several quotations from Fernelius, Nic. Fontano, &c. who advocate the same practice; and finally he objects, and we think with great reason, to the abstraction of large quantities of blood in pure fever likely to assume a typhoid character.—*Ibid.*

—

19. *Dr. Kinglake on Hernia.*—The mode of rendering the assistance, which it is the object of this paper to recommend, is that which has succeeded in six instances out of seven, and that too within ten minutes after commencing the trial. The principle of the treatment is founded on a leading and characteristic feature of the disease and of the practical difficulty with which its remedial means are closely connected: it is that of the contained air in the protruded intestine inflating and distending the prolapsed part to an extent that renders it too bulky to admit of its being returned through the unyielding or undilatable opening by which it has passed. What therefore should be attempted? Most certainly to diminish the flatulent distention or bulk as much as possible, so as to bring it within the area of the opening through which it is to be replaced.

This great remedial object may be effected by reduced temperature, topically applied through the medium of the coldest water that can be procured. Its sudden application by means of cloths dipped into that fluid, and renewed every two or three minutes during about half an hour will have the effect of so far abstracting heat from the hernial parts as to cause a perceptible diminution of the swelling. This is produced by the condensing influence of cold on the rarefied state of the air contained in the prolapsed portion of intestine.

When this diminution has been produced, the endeavour should be commenced to return the hernial tumor, and the mode of attemping it should be by pressing steadily but forcibly at the basis of the swelling, with a view to insinuate, as it were, a small portion of the air lying nearest to the hernial aperture in the first instance. This incipient step to ultimate success may with suitable management be soon effected, when the remainder will follow with the containing portion of intestine, and in passing the aperture will enter the cavity of the abdomen often with an audible report, and always with a jerk, not less satisfactory to the practitioner than gratifying to the patient. In all the instances in which this mode of relief has been pursued, no subsequent inconvenience occurred; the bowels soon became, with the aid of aperient medicine, sufficiently active; the previous vomiting ceased; and complete recovery was the happy result.—*Ibid.*

—

20. *Balfour on Hernia.*—In the month of August, 1814, I was called to Mr. Samuel Malcolm, aged twenty-eight, whom I found labouring under

symptoms of strangulated scrotal hernia. He had worn a truss for several years, but, the strap having broke, had laid it aside for two days previous to that on which I was called to him; when a hernial tumour, of considerable size, was formed, and refused to recede by the means he usually employed on similar occasions. I found him in bed, on account of a chilliness of which he complained, and general tenderness of the tumour to the touch; pulse natural.

I put my patient in the posture recommended by Mr. Samuel Cooper, and then proceeded according to Mr. Hey's directions, "by gently compressing the neck of the hernial sac, that its bulk might be diminished where the stricture was the greatest; and then pressing the diminished part towards the abdomen." I continued my exertions, with short intervals, for fifteen or twenty minutes, without effect. The patient had now become thirsty, yawned incessantly; and the tenderness of the parts had increased so that he intreated me to desist.

Finding I could not succeed, and satisfied that the tumour was exclusively intestinal, it occurred to me that, if I could pull the protruded parts downwards a little, inflammation would be retarded, by the constriction being removed to another portion of the bowels; that both constricting and constricted surfaces would in some degree be lubricated; that the distention of the vessel of the incarcerated portion of the gut would be taken off, and consequently its whole bulk diminished; and that the peristaltic motion might be restored: effects, which would all conspire in facilitating reduction.

But is there no injury to be apprehended, I asked myself, from using such freedom with the parts? If resistance, I replied, is considerable, I will desist; if there is little or no obstruction to their further descent, I can do no harm: for inflammation, however imminent, has not yet commenced. Besides, if Mr. Benjamin Bell and Mr. Hey could suspend the whole weight of the intestines by the protruded part without injury, much less risk must be run in applying a power which can be regulated at pleasure. Supporting the scrotum, therefore, in my right hand, and doubling up the integuments with the finger and thumb of my left, I laid hold of the gut, and pulled it gently downwards. Immediately on feeling it yield, I applied pressure upwards as before; when the tumour receded into the abdomen in the pleasantest manner, and with a gurgling noise.

From the date it will be seen that the above case occurred ten years ago. Indeed it had entirely escaped my memory, till, rummaging one day among a parcel of manuscripts, it presented itself to my view. I now lost no time in taking the opinion of some of the most eminent practitioners in this city on the subject. Every one stared at mention of the fact, as if he would have said, "How simple the idea! It is astonishing it did not occur to myself." All agreed that it was new, and that it unquestionably superseded the necessity of having recourse to the knife in the present instance. Now, any mode of cure that succeeds in one case may succeed in others similar to it.

As illustrative of the probable advantage to be derived from the fact in question, I would suggest a consideration of the phenomena which primarily occur in hernia. What, for instance, must be the immediate effect of even the slightest circular compression of the intestinal tube? Proportionate distention, certainly, of the vessels below the stricture, or of the isolated portion of the gut. It is very conceivable that cases of hernia frequently occur, in which the protruded parts completely fill the aperture through which they pass, without being sensibly constricted for a considerable length of time; and yet distention of the vessels below the aperture gradually, though imperceptibly, advances to that pitch at which it forms an insurmountable obstacle to the retrocession of the gut. A very slight degree of such distenton may effectually preclude success in the operation of taxis. But if, in such circumstances, the stricture can be shifted, as in the above case, to a different portion of the tube, the necessary consequence would be a diminution of distention of the vessels of the isolated portion. If to these are added

the other considerations which determined my practice in the present case, they will form a powerful *a priori* argument for its adoption in many cases of daily occurrence. At the same time, I am well aware that the utility of any new fact or practice in medicine and surgery can only be determined by time and experience.—*Ibid.*

—

21. *Dr. Hull on Hernia.*—About 10 months ago, the attention of one of the editors of this Journal was called to Dr. Hull's new patent hinge truss by the following circumstance: An eminent merchant from Charleston had been under our care, during a few weeks, for an affection of his head. On taking leave he observed, that he thought it a duty which he owed to the interests of humanity to make known to us the great advantages he had experienced from the use of "the New-York truss." He had been afflicted with an inguinal hernia several years, for which he had consulted many surgeons in this country and in Europe, and applied every kind of truss that could be obtained without being able to prevent the disease from returning on the slighest exertion. A few months before he came under our notice, he had consulted Dr. Hull, in New-York, who applied the new hinge truss with such perfect success that no descent of the hernia had ever afterwards occurred. The most interesting circumstance in the case, however, was, that no inconvenience had been experienced from the use of the instrument, which the gentleman recommended to us as by far the most excellent one that had ever been applied on his person. The warm and urgent recommendation of our patient induced us to procure a number of the instruments thus alluded to, for the purpose of giving them a fair trial under our own immediate observation. We have since that time applied them upon eight different patients, two of which were afflicted with double scrotal hernia. The results of our experience have been so satisfactory that we cannot avoid offering our testimony in favour of the new truss, which we consider as altogether the best which we have as yet been made acquainted with. We have lately been favoured by Dr. Hull with a copy of his pamphlet, and a bundle of impressions from his plate which illustrates the mode of applying the instrument. We will extract a few passages from the pamphlet, to accompany the plate on the opposite page. After pointing out the inconveniences and defects attending the use of the common kinds of trusses, he proceeds as follows:

"It is a matter of the deepest regret, that circumstances of so much consequence to an unfortunate class of our fellow-men should have been so little attended to in the construction and application of the preventive means for the different species of hernia: and that trusses combining so few of the principles which lead to the prevention of this calamity, and many of them evidently calculated to increase the difficulty and danger of the patient, should have obtained such general use, and been recommended in so many works of merit, which but tends to propagate error, and to prepetuate that obstinacy of prejudice for which the faculty are already but too justly distinguished.

"It was witnessing the above enumerated defects of all trusses, and the dreadful effects attendant upon rupture, which first led us to reflect upon the nature of the complaint, and to search for some more efficient means to mitigate the distress, and preserve the lives of our fellow-men. As a compensation for our research, is the gratification that we have thus far been enabled not only to secure every instance of reducible hernia, but to restore to perfect health a great proportion even of very aged sufferers. In the almost innumerable cases of children when this instrument has been applied, not a single instance has occurred, (within our knowledge,) which has not been cured in less than eighteen months, and few have exceeded six.

"The qualities we have united in the truss, are equally applicable to every species of hernia, and we can say, without the fear of contradiction

that the proportion of cures it has effected is altogether unparalleled. It may, perhaps, be an interesting inquiry to some, how this instrument produces its effects; and we think, after considering its construction, this question can be answered to the satisfaction of every rational mind. It will be observed, that this truss presents a concave surface to the rupture opening. The concavity of the plate is occupied by an elastic cushion, the resistance of which is sufficient to reduce the protruding intestine while it is prevented escaping to any considerable distance by the pressure of the metallic plate. Which pressure being greatest at the circumference and diminishing toward the centre, tends constantly to approximate the hernial parietes and afford them rest, and mechanical support. It is therefore obvious that nothing is suffered to intervene between the lips of the opening, as is the case when the intestine protrudes, or a convex pad is applied; but a fair opportunity is presented for the fibres to recover their tone, or to heal; when any laceration has been produced by violence done to the parts. It is a law of the animal economy, particularly noticed by Dorsey, that all hollow parts of the body, have a tendency to adapt themselves to their contents.

"For the cure of hernia, then, it is only necessary to remove every obstacle which counteracts this tendency. This indication is certainly very far from being answered by the convex pad, and we think it can only be fulfilled by one which shall reduce the bowel without dilating the ring; with this view, we have applied the concave pad, which has more than answered our expectations, in preventing a descent of the gut, and in restoring the fibres, which it undoubtedly greatly facilitates by its constant and uniform pressure. But without investigating the *modus operandi,* it is sufficient for the patient, and for all practical purposes, for the physician to know, that with this instrument hernia may always be secured. If applied in cases of unbilical, or congenital hernia in children, it will in every instance remove the necessity of an operation. In cases of congenital hernia, it should be applied before adhesion takes place, but not until the testicle has made its descent. If this particular period should be more carefully observed by surgeons, and the application of the truss, (instead of being abandoned to mechanics,) receive a greater share of their attention, they might be instrumental in obviating much of the distress which has been entailed upon the world.

"It is a fact well known to the profession in the county of Oneida, and has been a subject of congratulation in their Medical Society, where the truss was invented and first brought into use, that from the year 1800 to 1819, from three to five persons were annually the subjects of operations from strangulated hernia; and that from the year 1819 to 1822, not a single case had occurred within the knowledge of any individual member of the society. This surprising alteration was attributed, solely, to the general use of the instrument now under consideration.

"H—represents the umbilical truss;

"A—the situation of the rupture pad in umbilical hernia,res ting with its centre directly over the rupture opening. The spring of the pad passes close to the side, as represented by the plate.

"D—represesents the situation of the back pad upon the centre of the spine in corpulent persons, but a little beyond on spare or emaciated.

"I—is a representation of the double truss, when upon the body the principal part of the pressure is made upon the end pad, C; that should, therefore, be applied to the worst rupture.

"G—represents the single ing. truss; it differs in no respect from the double, without the addition of the second pad. If the rupture be in the right groin, this truss comes on from the left side as represented by K. And the same truss reversed for a rupture in the left groin.

"Fig. F—represents the instrument as applied in femoral hernia. The curve in the spring at F, is for the purpose of dropping the rupture pad lower in the groin, while the back pad retians the position E."

JEFFERSON MEDICAL COLLEGE.

The Medical Faculty of *Jefferson College* was instituted in June last, by an act of the Trustees of that Institution, appointing Professors to teach the various branches of knowledge comprised in a regular Medical Education.

By the same act the Faculty of Medicine were authorised to locate themselves in any part of the State of Pennsylvania, affording, in their judgment, the greatest facilities for the discharge of the trust committed to them. In these circumstances, the Faculty could not long hesitate in selecting Philadelphia, as obviously presenting to the Medical Student advantages for improvement far greater than could be found in any other part of the state.

In order to carry into full execution the design of the Trustees, a large and convenient building has been procured, and fitted up in a manner as suitable as could be desired for the Lectures and Demonstrations, connected with a complete course of Medical instruction.

The Lectures will commence on the Thursday immediately preceding the first Monday in November next, and will continue until the last of February.—The commencement, or time of conferring degrees, will be as early in the month of March as the examination of the candidates will admit.

Those persons will be entitled to a degree, who shall have attended two full courses of lectures in this school, or one course in any other school which has the power of conferring Medical Degrees, and one in this Institution; and who shall have been found qualified for a degree on a suitable examination.

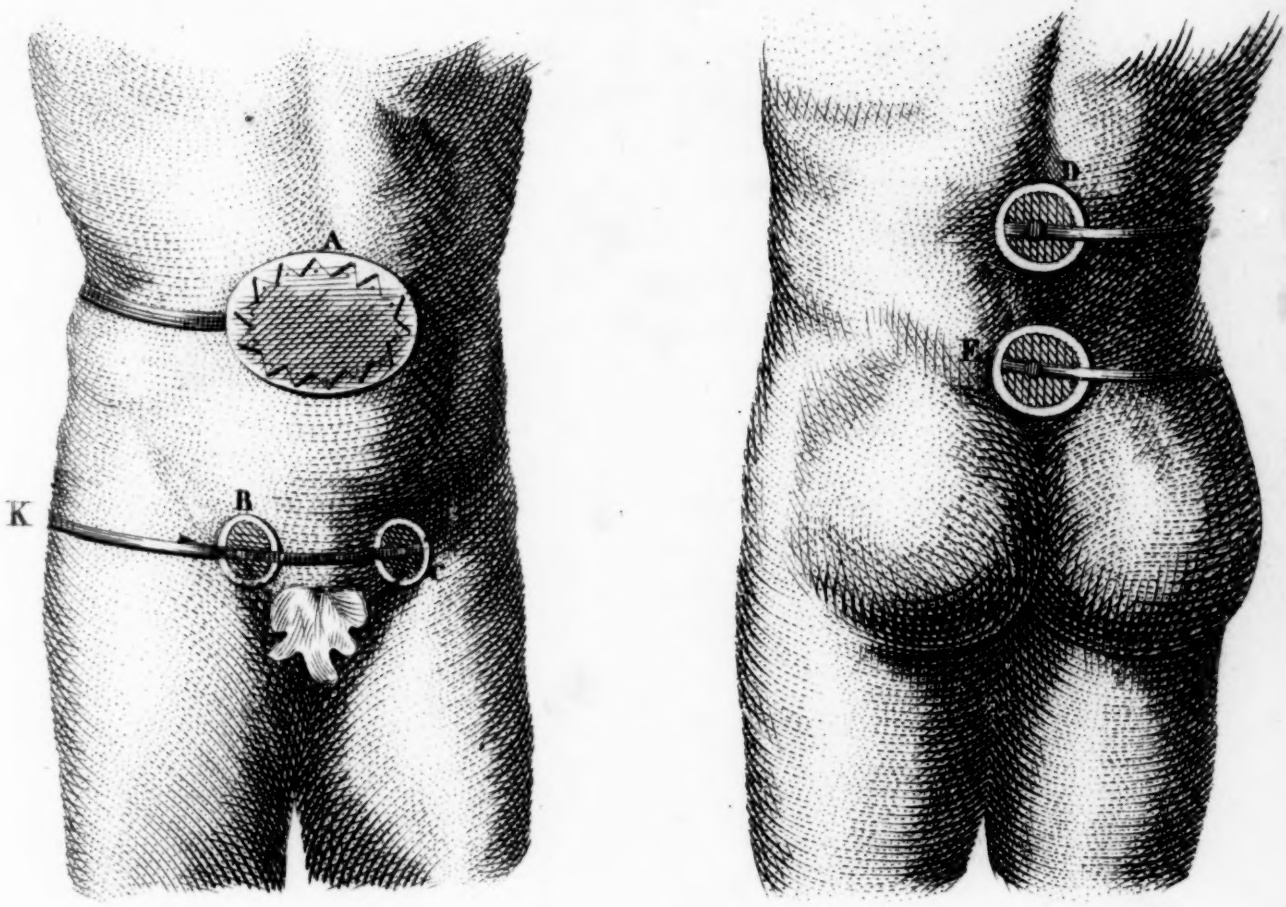
The fees for attendance on the Lectures will be $15, to each professor, for the course.
The fee for Graduation, $15.
No Entrance fee or matriculation ticket will be required.

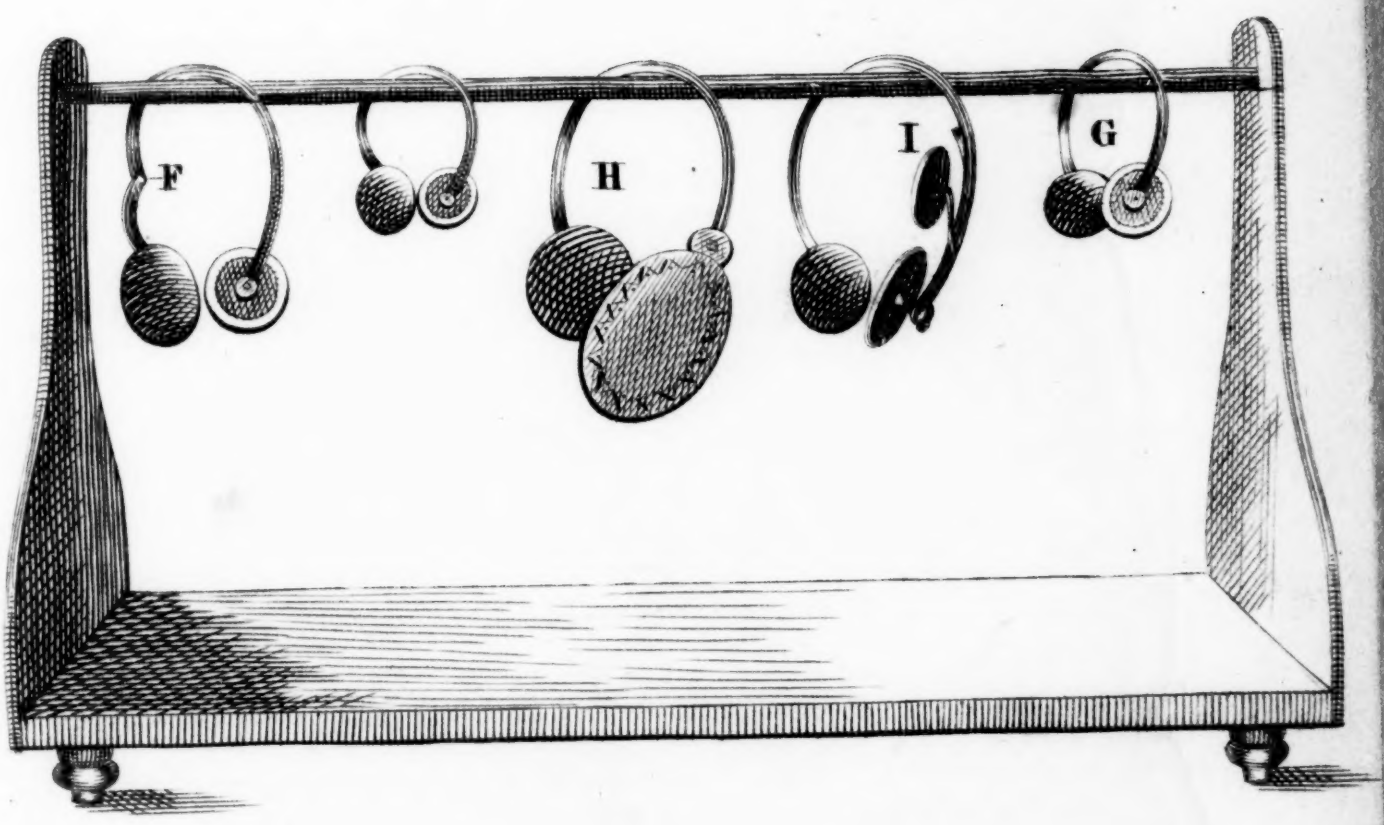
JOHN EBERLE, M. D. Prof. Theor. & Pract.
GEO. M'CLELLAN, M. D. Prof. Surgery.
JACOB GREEN, A. M. Prof. Chemistry.
B. RUSH RHEES, M. D. Prof. Mat. Med.
F. S. BEATTIE, M. D. Prof. Inst. of Med. and Midwifery.
NATHAN R. SMITH, M. D. Prof. Anat. & Physiol.

B. RUSH RHEES,
Dean of the Medical Faculty.

An Infirmary will be attached to the Institution for the benefit of the poor, requiring Medical or Surgical aid; to which all the Students will have free access, during the hours of operating and prescribing.

Large and commodious apartments are provided for the purpose of Dissection.


A
K
B
C
D
E


F
H
I
G

JEFFERSON MEDICAL COLLEGE.

The Medical Faculty of *Jefferson College* was instituted in June last, by an act of the Trustees of that Institution, appointing Professors to teach the various branches of knowledge comprised in a regular Medical Education.

By the same act the Faculty of Medicine were authorised to locate themselves in any part of the State of Pennsylvania, affording, in their judgment, the greatest facilities for the discharge of the trust committed to them. In these circumstances, the Faculty could not long hesitate in selecting Philadelphia, as obviously presenting to the Medical Student advantages for improvement far greater than could be found in any other part of the state.

In order to carry into full execution the design of the Trustees, a large and convenient building has been procured, and fitted up in a manner as suitable as could be desired for the Lectures and Demonstrations, connected with a complete course of Medical instruction.

The Lectures will commence on the Thursday immediately preceding the first Monday in November next, and will continue until the last of February.—The commencement, or time of conferring degrees, will be as early in the month of March as the examination of the candidates will admit.

Those persons will be entitled to a degree, who shall have attended two full courses of lectures in this school, or one course in any other school which has the power of conferring Medical Degrees, and one in this Institution; and who shall have been found qualified for a degree on a suitable examination.

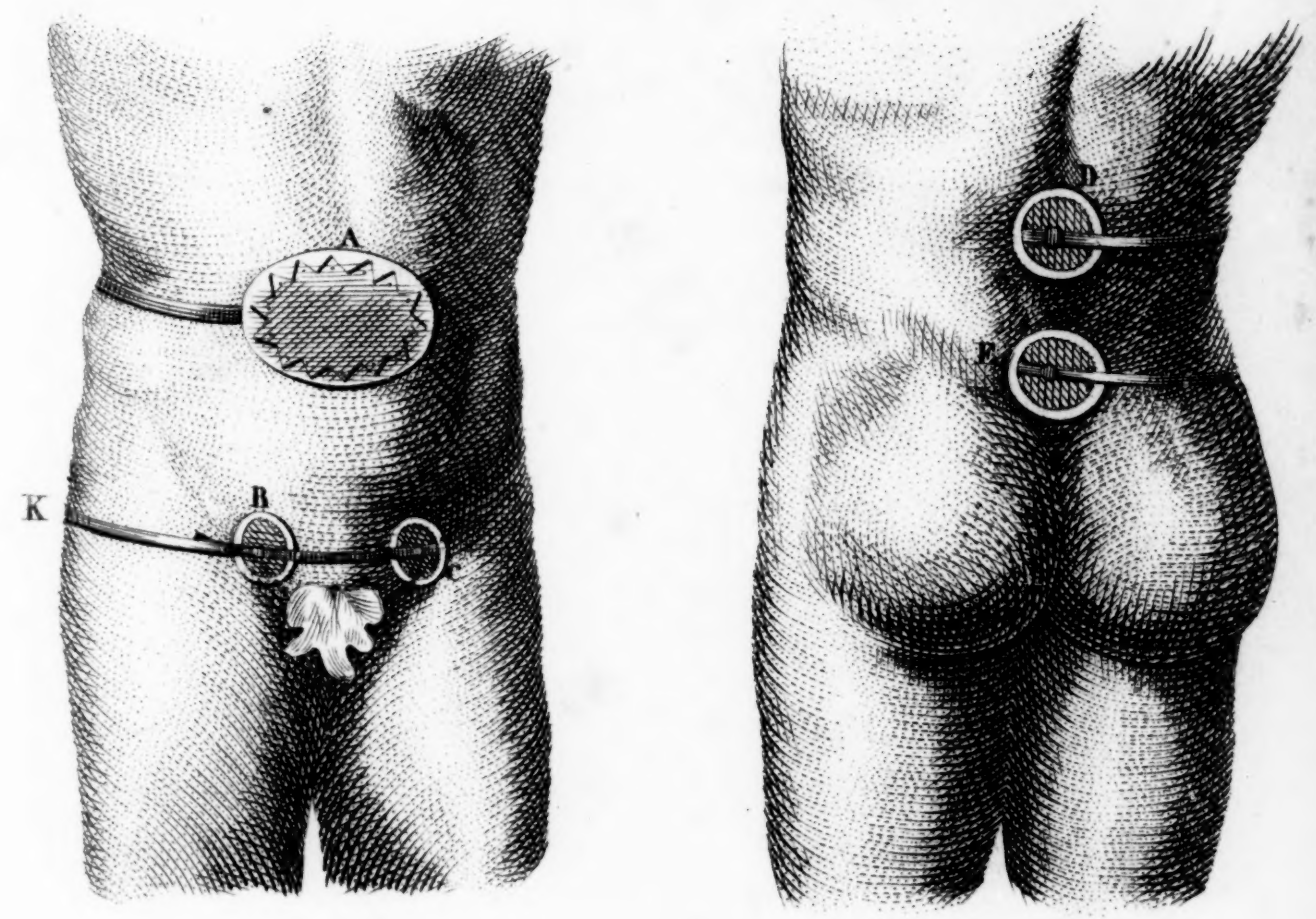
The fees for attendance on the Lectures will be $15, to each professor, for the course.
The fee for Graduation, $15.
No Entrance fee or matriculation ticket will be required.

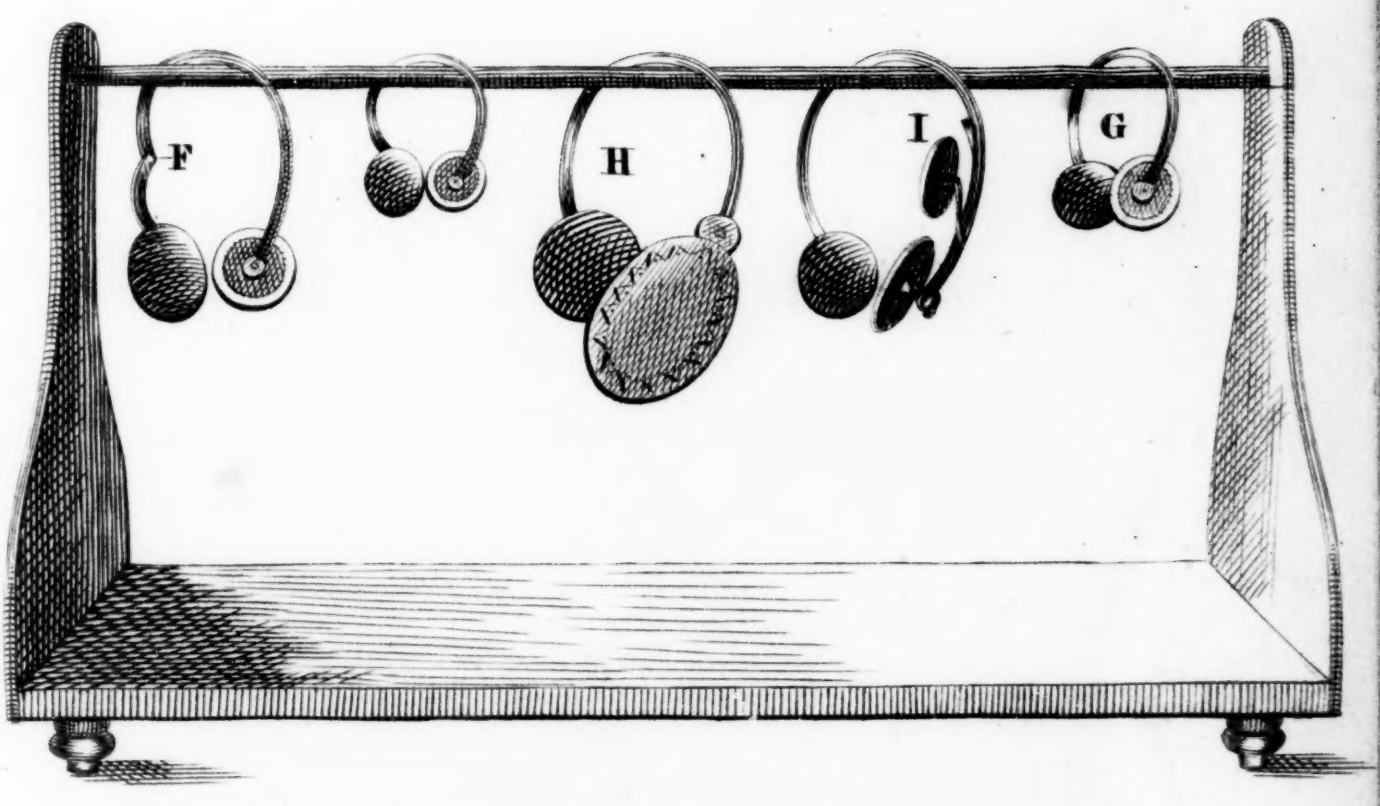
JOHN EBERLE, M. D. Prof. Theor. & Pract.
GEO. M'CLELLAN, M. D. Prof. Surgery.
JACOB GREEN, A. M. Prof. Chemistry.
B. RUSH RHEES, M. D. Prof. Mat. Med.
F. S. BEATTIE, M. D. Prof. Inst. of Med. and Midwifery.
NATHAN R. SMITH, M. D. Prof. Anat. & Physiol.

B. RUSH RHEES,
Dean of the Medical Faculty.

An Infirmary will be attached to the Institution for the benefit of the poor, requiring Medical or Surgical aid; to which all the Students will have free access, during the hours of operating and prescribing.

Large and commodious apartments are provided for the purpose of Dissection.


A
K
B
D
E


F
H
I
G